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ABSTRACT

This report study which was carried out to determine the effectiveness of Occupational Information Access System (OIAS) usage in the counseling units of three employment division offices in Portland, Oregon. Two versions of OIAS, a computer-linked version and a manual card-sort version, were compared with the traditional mode where counselors deliver occupational information during the counseling process. Research findings based on the experience of seventeen counselors and 267 clients, both disadvantaged and nondisadvantaged, found both forms of OIAS to be a more effective means of delivering occupational information for use in the career decision-making process. The vast majority of clients indicated that they would use OIAS again if they needed information in the future, and that they would like to see OIAS kept in the employment offices where they had used it. Client reactions to OIAS and the findings of the study are discussed in detail. The appendix includes a description of the methodology used together with copies of forms used for evaluation interviews. (Author/KP)

# OCCUPATIONAL INFORMATION FOR ES COUNSELING

BY

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## An Evaluation of Occupational Information Access System Pilot Use in Three Portland Employment Division Offices

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Eugene, Oregon

November, 1972

# Preface

How should you evaluate something like OIAS? Ultimately, in terms of its impact on the labor market performance of its users, but that is expensive and time-consuming evaluation. There are also shorter-term criteria, most of which are easier to assess. Some have to do with conceptual and technical matters--readability, validity, data sources, costs. Others have to do with the responses of users--can they operate the System, do they like it, do they think it is helpful? This report deals with the responses of users.

Here we have the accumulated experience and opinions of two hundred people--conselors and clients--who used the System in actual career planning situations and under all the practical limitations of time, budgets, and competing demands.

A word of explanation is due those who may wonder about the difference between OIAS and the Career Information System. Briefly, OIAS is an information delivery system; the Career Information System is an organization that (1) develops current occupational information; (2) manages occupational information delivery systems such as OIAS; and (3) helps Oregon schools and agencies integrate such information and delivery systems into their counseling and instructional programs.

The report deals exclusively with OIAS usage in the Employment Service. It was prepared by Jerry T. Weick, who was a counselor in the Concentrated Employment Program at the time of the Portland test, where he used the System with clients. The report thus reflects the perspective of a practicing counselor who tried using the System with some of the most difficult clients, the severely disadvantaged.

Special thanks is due the counselors and counseling supervisors involved in the test for their cooperation, their extra efforts on behalf of the experiment, and their constructive comments. Obviously the experiences and opinions of both counselors and clients vary, just as their needs, abilities and "styles" vary, but there are clear patterns of experience, and there is broad-based agreement on many important issues.

Bruce McKinlay, Director of CIS
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# CHAPTER I

## SUMMARY

This study establishes the effectiveness of Occupational Information Access System (OIAS) usage in the counseling units of three Employment Division offices in Portland. Two versions of OIAS, a computer-linked version and a manual card-sort version, were compared with the traditional mode where counselors deliver occupational information during the counseling process. OIAS was found to be a more effective means of delivering occupational information for use in the career decision-making process.

Client self-use of OIAS was examined throughout the test. The experience of clients in completing the QUEST questionnaire, obtaining a list of occupational titles to explore and acquiring one or more specific occupational descriptions was monitored throughout the test, with counselor interpretation at strategic points. This experience led most counselors to conclude that OIAS can be operated by clients. Counselors judged that technical assistance and interpretation of the occupational lists are desirable. The vast

majority of clients, both disadvantaged and non-disadvantaged, found OIAS attractive, fun to use, and helpful in making job plans.

Research findings based on the experience of 17 counselors and 267 clients, both disadvantaged and non-disadvantaged, include the following:

--OIAS usage enriched the occupational decision-making process by stimulating exploratory activity and introducing more order into the decision-making and counseling process.

--OIAS raises the level of client participation in the career planning process and facilitates client-counselor communication.

--Both the computer and card-sort versions effectively and efficiently assist the vast majority of clients in making job plans.

--The computer version is more attractive than the needle-sort and preferred by most counselors, though both are effective delivery vehicles.

--The information components of OIAS provide satisfactory and pertinent information in effective, yet varied formats.

--OIAS made available more and better information within the time usually spent by counselors on information delivery.

--There was some small savings in staff time.

--With the exception of the severely disadvantaged who lack basic language skills, disadvantaged clients are able to use and gain the same benefits from System usage as non-disadvantaged clients.

--There is a distinctly different occupational decision-making process between disadvantaged and non-disadvantaged clients.

Overall the evaluation indicates that OIAS is an effective instrument for providing pertinent occupational information to the vast majority of the counseling clientele served by the State Employment offices in Portland. No counselor indicated that the use of OIAS had any adverse effect upon any client. While the System was expected to have its limitations, a number of especially helpful aspects are unanticipated benefits. The vast majority of clients indicated that they would use OIAS again if they needed information in the future and that they would like to see OIAS kept in the Employment offices where they had used it.

# CHAPTER II

## BACKGROUND

Occupational labor market information occupies an increasingly critical role in career choice and career decision-making processes. Increasing labor market complexity and change impose specialized and shifting demands upon the individual in the labor market and accentuate the need for individual career planning. One result of these changing conditions has been recognition of the need for new formats and methods for systematizing, processing, and delivering occupational information in ways which more adequately reflect these complex conditions and respond to the information needs of contemporary labor market participants.

Response to this need resulted in the development of the Occupational Information Access System (OIAS) at the University of Oregon with funds and technical assistance provided by the U.S. Employment Service, Manpower Administration, U.S. Department of Labor.

Stimulating the development of OIAS were some basic observations. First, vocational planning and decision-making based on

reliable and valid information have a higher probability of success than plans made without such information. Second, while the U.S. Department of Labor has carried the primary responsibility for development of labor market data, new information is needed and much that is available is underutilized. The complex of agencies and private firms that offer this information and the reliance on printed media contribute at least partially to this underutilization. Third, the multiplicity of occupational classification systems makes comparable information accessible only to those knowledgeable about such classification systems. Consequently, most students and job seekers are unable and do not avail themselves of such information.[1]

## The Occupational Information Access System

OIAS is designed to make available information accessible and understandable by individuals making career plans. The person using the System typically begins by responding to the 25 questions in the QUEST questionnaire, typing his or her responses into the computer via a teletype terminal or using a manual needle-sort

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[1] Bruce McKinlay, "Occupational Information Access System: A Model System of Labor Market Information For Use In Counseling," Journal of Educational Data Processing, Vol. 7, No. 5, p. 1.

card file to obtain a list of occupational titles or a stack of occupational cards. From this point there are a number of directly available information components, including concise occupational descriptions, a bibliography of the most important general and specific information sources about each occupation contained in the System, taped interview cassettes, and, depending upon particular system applications, an index of employers who hire persons in specific occupations or a file of persons working in a specific occupation who are available to discuss their occupation with an interested person.

## Summary of Research to Date

A central thrust in the early development was the desire to build a delivery system which could be used directly by the person in need of occupational information, that is, as a tool for independent student or client use. This led to an early project study which assessed the readability of the QUEST questionnaire and the validity of self-report of the questionnaire as a means of gathering pertinent information.

> "Field testing of these materials showed very few readability problems. Over 90 percent of the counselors and clients in various schools and social agencies who tested the System rated it easy or very easy to use. In a special readability and validity test conducted in three

> Employment Service offices, wording problems were reported on only two percent of the QUEST questions answered, and in only one half of one percent of the questions were wording problems associated with response error. Surprisingly, disadvantaged users reported fewer wording problems than non-disadvantaged users.
>
> Even with the more difficult occupational descriptions, 96 percent of the users (in this case high school students) said they were easy or very easy to read.
>
> Readability does not seem to be much of a problem with Occupational Information Access System. The crucial issue has to do with the validity of self-reporting."[2]

In response to this question the report goes on to state the following.

> "There is some indication in this research that client self-reports are as valid as counselor estimates, and other research summarized in this report indicates that self-reporting is as valid as testing. Thus, while self-reporting may not be relied upon completely for all clients, it is at least one of the appropriate bases for questionnaire response."[3]

OIAS was pilot tested in six varied agency settings. These included a large high school in Eugene, two Oregon Employment Division offices, Lane Community College, a Vocational Rehabilitation Division office and the University of Oregon Counseling Center.

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[2]Bruce McKinlay, "Validity and Readability of the Occupational Information Access System 'QUEST' Questionnaire," 1971, pp. 1-2.

[3]Ibid., pp. 2-3.

Major conclusions of the pilot testing indicated that: the System was used extensively and constructively with very favorable results by a wide range of different kinds of students and agency clients; it adds to the thoroughness of career counseling; the teletype terminal is a highly effective and attractive delivery device; the QUEST (questionnaire-list) process is effective; and the four information files received generally favorable response with the 250-word descriptions receiving the greatest use.[4] This pilot test was most encouraging about the System's applicability with students, but left unanswered questions concerning agency usage.

On the basis of the positive results of the pilot testing in schools, two detailed evaluations were completed in 1971. A test of OIAS at the Counseling Center at Lane Community College compared the delivery of occupational information by the Counseling Center and that of OIAS with ten characteristics of an ideal occupational information delivery system.

> "Compared with a model occupational information checklist comprised of characteristics on which most counseling authorities agree, the computer-based Occupational Information Access System (OIAS) rated

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[4]Bruce McKinlay and Larry L. Ross, Evaluation of Occupational Information Access System Use In Six Pilot Agencies, University of Oregon, Eugene, Oregon, 1970.

"good" and the Lane Community College Counseling Center "fair."[5]

More specifically the report noted that "all but one counselee... sought counseling out of a definite need for occupational information" and that "all but a few students were either very satisfied or satisfied with the information they received from either system."[6]

> "Study results indicate that OIAS is at least as effective and definitely more efficient as an information delivery system.
>
> The ability of OIAS to deliver occupational information more efficiently and much less expensively than the Lane Community College Counseling Center does not mean that OIAS should be substituted for counselors. In fact, OIAS would be a poor substitute for a college counselor, since it only serves the purpose of information delivery. Counselors, whose tasks typically involve personal advising as well as delivering occupational information, could benefit from using OIAS to obtain information. The time previously spent filing occupational materials and searching through innumerable information sources could be spent offering personal human advice to college students."[7]

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[5]Larry Lynn Ross, The Effectiveness of Two Systems for Delivering Occupational Information: A Comparative Analysis, Master's Thesis, University of Oregon, Eugene, Oregon, 1971, pp. 81-82.

[6]Ibid., pp. 81-82.

[7]Ibid., pp. 83-84.

A project report, published just after the community college study, evaluated usage of OIAS at Churchill High School in Eugene where the System proved very attractive to the slightly more than 1,000 students who used it. Repeat usage was common and there was evidence that OIAS was not only interesting to students but actually helped them in career planning. Most indicated it gave them new ideas and those who used the System consistently showed that they knew more about job prospects on a test of knowledge than those who did not use it. About two-thirds of the students who used OIAS talked with their parrents about the System with most taking materials home with them. However, while OIAS was influential with students, it had little effect on established instructional programs. Lastly, the study revealed through a comparative cost analysis that OIAS was only half as expensive as having either a teacher-aide or counselor man an occupational information room.[8]

## The Portland Employment Service Test

With the results of the pilot testing and the encouraging outcomes of two major tests at Lane Community College and Churchill

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[8]Bruce McKinlay and Daniel Adams, Evaluation of the Occupational Information Access System As Used At Churchill High School, A Project Report, University of Oregon, Bureau of Governmental Research and Service, 1971, pp. 2-4.

High School, a full scale test of OIAS in three Oregon State Employment Division offices was conducted to determine to what extent the same system would be applicable with agency clients. The results of this test constitute the present evaluation. The three offices were the Adult Opportunity Center, the Youth Opportunity Center and the Portland Concentrated Employment Program.

In each setting the same test format was followed. Clients were selected from the current population of persons engaged in the process of making or changing an occupational choice through counseling. Each client selected was randomly assigned to one of three groups: a control group, an experimental group who used the needle-sort version, or an experimental group who used the computer version to access information. The test was conducted by the Employment Service counselors and their clients. Each counselor who participated worked with clients in all three test groups, thus insuring control for counselor differences.

This report is based on evaluation data collected from three major sources. First, questionnaires were completed by clients in each experimental group. Secondly, a companion questionnaire was completed by each client's counselor. Both questionnaires included structured responses and unstructured comment sections.

Finally, OIAS project staff conducted follow-up interviews with each counselor who participated in the test. Thus, the structured responses provide a framework which the unstructured observations, impressions, conclusions and suggestions elaborate and enhance. Together they present a balanced analytic base for the present evaluation.[9]

The major areas of emphasis in the evaluation are the impact of information on client occupational planning, the effectiveness of the QUEST questionnaire, the clients' and counselors' assessments of the content and format of the information, the extent of technical assistance needed by the client in using the System, and the effectiveness of OIAS for both non-disadvantaged and disadvantaged clients.

Throughout the test, counselors operated within their regular work schedules. No additional time was available for counselor participation in the study. Thus, counselors had to adapt and incorporate the new procedure into their daily work schedules. While individual counselor interest varied from fair to enthusiastic, the overall level of cooperation was excellent. In spite of limitations, almost every counselor considered the test to be representative.

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[9]For detailed presentation of methodology see Appendix.

# CHAPTER III

## IMPACT OF INFORMATION

The impact of information on clients' plans and activities is of paramount importance, since the reason for introducing occupational information is to improve career plans. Counselors evaluated the effects of OIAS usage very shortly after a client finished using the System, so the reported outcomes are descriptive of expressed feelings, decisions and plans related by the client. The short term of the evaluation precludes follow-up examination of the clients' labor force behavior. In spite of this limitation on observed outcomes, the impact of information on client understanding and plans can be judged from counselor and client opinions at the time of the experiment. There are several items in the evaluation that bear on this issue, and differences were pronounced between those who used the System and those who did not.

Counselors were asked to rate, for each client, their overall impression of how influential the information had been. In three-fourths or more of the cases, counselors rated information obtained through OIAS as influential. In this experiment there was a control

group which received information from the counselor in the traditional manner. The counselor presented the information to control group clients when it seemed appropriate to him; whereas the experimental groups received information through use of OIAS as an identifiable step in the counseling process.

Table 1 shows a relatively consistent pattern of counselor rating for all three groups. The most striking difference is the rather high rating that counselors gave to information they themselves presented to the control group. The descriptive comments of counselors give meaning to the difference. In cases where counselors said control group clients were not influenced by information given by the counselors, the counselor simply stated, "no effect," "not influenced at all," while they gave more explicit reasons, such as, "client is not ready to seek a vocational goal,"

TABLE 1

COUNSELORS' RATING OF INFLUENCE OF INFORMATION ON CLIENTS

| Rating of Information Influence | Experimental Groups | | Control Group |
|---|---|---|---|
| | Computer | Card-Sort | |
| Highly influential | 18% | 27% | 40% |
| Somewhat influential | 62 | 48 | 51 |
| Not influential | 19 | 23 | 8 |

and "client was referred from a halfway house, not ready for employment yet," when giving a low rating to information from OIAS. Since information presented through OIAS was presented as a discrete part of the counseling process, those results may have been viewed more objectively, though this is only speculation.

More informative than these ratings are the responses of counselors when asked about identifiable actions taken by clients. The differences are pronounced. The behavior attributed to the use of information tended to be more specific for the OIAS experimental groups than for the control group. When talking about clients who used OIAS, counselors more frequently used words such as "plans," "planning," and "next step is...," and "began to plot definite steps toward action." When further counseling interviews were planned, the counselor more often expressed specifically the purpose of the additional interview. Plans to explore new or different occupational areas was reported far more frequently. These counselor comments reveal much more definite and precise plans and purpose for continued counseling.

In contrast, descriptions of control group client actions were more often couched in vague terms. Comments such as "he seems to have narrowed choice down...," "client became enthusiastic about continued counseling," and "may try to find a job" were more

frequent. When continued counseling was scheduled, the purpose of the additional interview tended to be expressed in less precise terms such as "to come back for further study." While counselors reported directing many control group clients to occupational information and resource materials, there was a general absence of comments that indicated any orderly exploratory process except where a specific occupation was the point of exploration.

These are important and significant differences. Since assignment of clients to groups was random, and since each counselor participated in the test and evaluation of both control and experimental group clients, the differences cannot be attributed to client or counselor differences, but are a result of OIAS usage. As already discussed, since use of OIAS was a distinct component of the counseling process, the counselors were able to observe and specify outcomes more clearly. Thus, OIAS tended to operate as a feedback mechanism on the relevance of information to the client. It also tended to point out clearly those clients who were not ready to approach the occupational decision-making process and who needed counseling to help resolve more fundamental problems first.

## Purpose of Information Usage

The effect of OIAS is further elucidated by counselor ratings of the purpose of information usage by clients. Table 2 clearly points out that counselors see vocational exploration as the purpose of occupational information when OIAS is used, but they more often see decision-making as the purpose of information when information is delivered in the traditional manner. While a variety of interpretations can be offered, the comments of clients and counselors provide the best elaboration of these data. Although descriptive comments were not gathered from control group clients, the comments of OIAS users are instructive. They commented on "the diversity of job types and fields which (were) applicable," "made me aware of some positions for which I was qualified that I had not considered," "it gave me more ideas," "provided some possible jobs

TABLE 2

COUNSELOR RATINGS OF HOW INFORMATION WAS USED BY CLIENTS

| Purpose of Information | Experimental Groups | | Control Group |
|---|---|---|---|
| | Computer | Card-Sort | |
| Exploration | 60% | 60% | 41% |
| Decision | 17 | 20 | 34 |
| Confirmation | 23 | 20 | 25 |

I hadn't thought about before" and "let me know of different job opportunities available that interested me." These comments were typical of clients who sought counseling, and who were not seeking specific information or confirmation of a prior decision about a particular job. However, even in some of the latter cases, comments indicate changes in decisions based on information obtained from OIAS. It is apparent that OIAS adds a distinct and useful "exploration" phase to the career planning process.

## Efficiency of Information Delivery

In the follow-up interviews most counselors indicated that, while OIAS did not reduce the amount of time spent in counseling a client, it brought more information to bear and made more alternatives available within the same amount of time. Describing the impact of information obtained through OIAS, counselors made comments such as "it gave me a little something more to explore on," "it took a shorter time to cover more," "it broadened my information," "on many of my counselees it gave them other alternatives; ideas that had not occurred to me," "a big help, helped organize where to go," "a lot of information came back on the computer (terminal) that they wouldn't have dug out for themselves,"

and "(OIAS) brought together information it would have been hard to accumulate."

The preceding client and counselor comments provide explanation for the differences in counselor ratings between the control and experimental groups. OIAS usage provided more information and more alternatives within the same amount of time. Some counselors indicated that in some instances it would have required three or four times as long to assemble, present, and utilize the same amount of information without the assistance of OIAS. A few counselors stated that they would never have been able to assemble and deliver the same amount of information without OIAS. Since more information and alternative choices were available to OIAS users, more exploration resulted.

## Effect of OIAS Usage on Decision-Making Process

OIAS usage amplified the decision-making process, and, as indicated earlier, it tended to introduce more order into the occupational decision-making and counseling processes. Counselors tended to take advantage of the increased information available through OIAS. This resulted in lengthening the decision-making process, because the additional information enhanced exploratory activity both quantitatively and qualitatively. OIAS usage also tended to clarify the

purpose of continued counseling. The differences in counselors' ratings of the purposes of information usage reflect this fact. The extent and net effect of this expanded decision-making process would require a longitudinal evaluation of continued counseling with the clients in both the control and experimental groups, but there is no question that the increased amount of information provided by OIAS enriched the occupational decision-making process.

# CHAPTER IV

## EVALUATION OF CLIENT DEMAND FOR OIAS IN STATE EMPLOYMENT OFFICES

Apart from the effectiveness of OIAS it is important to know whether clients will use it. Of course they can be directed and encouraged by counselors to use it, but one would hope for a system that clients would use as a matter of choice. In order to gain some estimate of the client demand for OIAS, they were asked two specific questions.

First, they were asked whether they would use OIAS again if they needed job information sometime in the future.

TABLE 3

CLIENTS WHO INDICATED THEY WOULD USE
OIAS AGAIN IF THEY NEEDED
JOB INFORMATION LATER

| | | Computer | Card-Sort |
|---|---|---|---|
| Total, All Clients | 96% | 94% | 88% |
| Non-Disadvantaged | 92 | 89 | 94 |
| Disadvantaged* | 91 | 98 | 76 |

*Clients of Employment Division offices and programs are classified as "disadvantaged" according to criteria defined by the U.S. Department of Labor and used to determine qualification of persons for special programs and services. The criteria include racial minority membership, lack of a high school diploma or G.E.D., whether the person is handicapped, younger than 22 or older than 45 years of age, and prior annual income below the federally-defined poverty level. A combination of these factors make a person eligible for program services.

These ratings reveal an extremely positive overall response to OIAS and a very definite future demand for the System. There were instances of clients leaving some Employment Service offices to go to the Youth Opportunity Center (YOC) or the Adult Opportunity Center (AOC) "where they have all that information on the computer." It is particularly significant that 98% of the disadvantaged clients would use the computer version of OIAS again, while disadvantaged

clients who used the card-sort showed appreciably less enthusiasm. Still, the 76 percent positive response constitutes definite support. The difference between ratings of the non-disadvantaged experimental groups cannot be considered significant. The pattern of responses in the four categories are consistent with the conclusions of the relative effectiveness and attractiveness of the computer and card-sort versions for disadvantaged clients.

The other pertinent question asked of clients was whether OIAS should be kept at the Employment Division. Table 4 shows the responses of experimental groups to this question.

TABLE 4

CLIENTS' RECOMMENDATION ABOUT KEEPING OIAS AT THE EMPLOYMENT DIVISION

| | Non-Disadvantaged Clients | Disadvantaged Clients | Computer Version | Card-Sort Version |
|---|---|---|---|---|
| (92% of Clients Responded) | | | | |
| Definitely Yes | 60% | 49% | 60% | 47% |
| Yes | 39 | 49 | 39 | 49 |
| No | 1 | 2 | 1 | 4 |
| Definitely Not | 0 | 0 | 0 | 0 |

This question shows the same strong pattern of demand among clients. Again it is significant to note the very high proportion of disadvantaged who responded with strongly positive ratings. Evidently some clients who indicated they would not use it again or who felt they were not helped by the System themselves, thought that others would benefit from using it. From these results, there appears to be a definite demand for OIAS in the Employment Division offices in Portland. Client responses corroborate the need expressed by counselors for OIAS an an information resource, and suggest that it would have continued usage.

# CHAPTER V

## TYPES OF CLIENTS WHO CAN BENEFIT FROM OIAS

Evaluation indicates that OIAS is an effective instrument for providing pertinent occupational information to the vast majority of the counseling clientele served by the State Employment offices in Portland. This includes the disadvantaged as well as the non-disadvantaged population. However, it is possible to be somewhat more precise about the range of effectiveness of the System. This can be determined from analysis of clients for whom OIAS is particularly helpful and efficacious and those who are little helped or who cannot benefit from using such a system.

To assist in this evaluation, counselors were asked if OIAS is more useful with one kind of client than another; their comments are diverse. Four counselors specifically mentioned the severely disadvantaged, or non-readers, as people for whom OIAS was not especially helpful, but one counselor said the System was particularly appealing to the non-reader. Five counselors mentioned that the System was more useful with clients who were committed to

finding a direction and choosing an occupational goal; while two counselors reported that OIAS was particularly helpful in drawing out passive or withdrawn clients and in resolving impasses in the counseling process.

Counselor comments are more consistent regarding the limitations of OIAS. When asked if there are particular clients with whom OIAS is bad, one-third of the counselors reported there were no clients for whom the System was inappropriate. Others said that clients with low abilities, the severely disadvantaged or clients with very low reading skills are the persons helped least by OIAS. Finally, one counselor said the results of QUEST were not sufficiently discriminating for handicapped persons. Evidently, certain limitations resulting from handicaps are not reflected in responses in the questionnaire, so some inappropriate occupations appear on the list.

In the variety of comments there are some consistent themes. First, OIAS is not well adapted to the severely disadvantaged persons with very limited or no reading skills, though the disadvantaged in general benefited substantially. Secondly, it appears that persons with very low abilities tend to be discouraged by OIAS, and probably need extra counseling to make a sound and satisfactory occupational

decision. Thirdly, even the attractiveness of the process cannot motivate the client who is not really interested in an occupational goal.

None of these three limitations is a major defect of the System. Rather, they help delineate the areas of the System's effectiveness, and provide guidelines as to which clients should use OIAS.

It is significant that no counselor indicated the use of OIAS had any adverse effect upon any client. While the System is expected to have its limitations, a number of the especially helpful aspects are unanticipated benefits. In addition to providing the counselor valuable information, usage of OIAS can assist the counseling process to facilitate counselor-client communication. It offers an alternative means of expression of interests, preferences, and skills for clients who have difficulty verbalizing these matters to a counselor. The objective character of the System provides both counselor and client with an expanded base of information about the client as well as relevant occupational information. Its attractiveness for clients is another positive feature which increases the counselor's credibility with clients and raises the level of client participation in the career planning process.

# CHAPTER VI

## ANALYSIS OF USAGE OF QUEST QUESTIONNAIRE AND LIST

The QUEST questionnaire is a key component of OIAS, since it furnishes the introduction and starting point for the typical System user. The ease of usage, the efficiency and effectiveness of an introductory component such as QUEST contributes substantially to the value and effectiveness of the entire system. Therefore, a wide range of factors were considered and included in the evaluation. A range of structured responses and descriptive comments about the process, content and format of the questionnaire and resulting list of occupational titles were elicited from both clients and counselors.

### Client Self-Use

Self-use was a basic procedural feature utilized in testing QUEST and was a specific point of interest in the evaluation. The efficacy of self-reporting on the questionnaire depends upon its readability, comprehensibility and the clarity of the printed instructions, as well as upon the validity of self-reporting generally.

A separate study of the technical issues of readability and validity of the QUEST questionnaire has been done. Of interest here are the operational considerations of client self-use.

Though much data relating to client self-use was collected, the best conclusion comes from the follow-up interviews, when counselors were asked how they would use QUEST if they were free to use the questionnaire any way they wanted to in their counseling. This question covers the four major steps involved in using the questionnaire. (See Table 5.)

The overall pattern of responses indicate that counselors largely see QUEST as a tool for client use. Only one counselor on one item, a mechanical procedure, thought that the counselor should perform the principal role in that activity.

Filling Out the Questionnaire

Seventy percent of the counselors thought the client capable of completing the questionnaire alone or with only routine technical assistance. Among the 30 percent who thought counseling and interpretation necessary at this step were counselors who expressed doubts about client ability to self-report, and who preferred to interpret and restate questions in an attempt to correct any distortions in client judgment. The distribution of counselor ratings on filling

TABLE 5

COUNSELOR RATINGS OF DESIRABLE LEVELS OF CLIENT AND COUNSELOR INVOLVEMENT IN USING QUEST

| Steps | Level of Counselor Involvement Desirable | | | | |
|---|---|---|---|---|---|
| | Client Alone | Client with only technical assistance from counselor | Client with counseling and interpretation | Counselor with client watching and helping | Counselor Alone |
| Filling out the questionnaire | 35% | 35% | 30% | 0% | 0% |
| Reading and understanding the instructions for using the terminal or card-sort | 6 | 77 | 17 | 0 | 0 |
| Typing answers in the terminal | 35 | 53 | 6 | 6 | 0 |
| Reviewing the list of occupational titles | 17 | 6 | 77 | 0 | 0 |

out the questionnaire reflects differences in individual counseling styles as well as client abilities; to this extent the ratings cannot be construed as pure judgments of client capability to fill out the questionnaire.

Readability and comprehensibility of the questionnaire and instructions were important aspects of the self-use format. When asked to assess the readability of the questionnaire for clients, 69 percent of the counselors indicated that there was no problem with reading for most clients, although there was ambiguity in some specific questions. One counselor who worked at the Concentrated Employment Program commented that reading difficulty for disadvantaged persons was generic, and not a problem of the questionnaire or the System.

During the test, counselors were asked to review the client's questionnaire with him before getting a list. In the final interview, counselors were asked about the necessity of this procedure. While 77 percent thought some review was either necessary or preferable with most clients, most counselors indicated that the review was brief and principally aimed at spotting obvious errors or inconsistencies.

Reading and Understanding the Instructions and Using the Terminal

The vast majority of counselors thought that clients were capable of reading and understanding the instructions, typing the answers into the terminal and sorting the cards. However, they saw the availability of routine technical assistance during these steps as necessary.

Descriptive comments of clients and counselors reveal some problems with mechanical malfunctions of the terminal, but most difficulties stemmed from minor procedural errors of clients in using the terminal. These difficulties generally resulted from a failure to follow the instructions properly, or from client's unfamiliarity with any similar kind of machine operation. Most of the difficulties experienced at this stage were easily overcome with minor technical assistance, but some clients needed considerable assistance to complete this step. Even in these cases it was still a matter of providing technical assistance rather than counseling. No counselor commented that the instructions were difficult to read or understand. Rather, they tended to comment on client ability to understand and apply the instructions. In fact, one counselor noted that client activity while using OIAS provided a behavior sampling which indicated client ability to follow instructions and operate equipment.

Reviewing the List of Occupational Titles

Reviewing the list of occupational titles is the step where reporting has been completed and client decision-making becomes the major activity. After obtaining a list, the format of OIAS becomes much less structured and allows the client a number of different options. The alternatives include seeking specific job descriptions and occupational information, determining why a particular occupation was not included in the list, changing responses to specific questions on the questionnaire, and discussing the resulting list in order to insure that the client understood the meaning of the results and to rectify any errors which might have developed in the previous steps.

There were three basic questions regarding client self-use of QUEST. (1) Can they self-report abilities and preferences? (2) Can they understand and operate the System technically? (3) Can they adequately interpret the results and prepare their own career plans?

The question of self-reporting was the subject of a project technical paper, "Readability and Validity of the QUEST Questionnaire." This test adds the opinions of practicing counselors who used the System. Most of them hold the opinion that self-reporting is a reasonable first approximation, and that brief review of the completed questionnaire and the opportunity for later revision

provide adequate means for resolving any problems clients have with self-reporting.

Secondly, this test of OIAS attempted to discover whether clients could operate the System independently. This was a particularly essential issue regarding the use of QUEST. Results indicate clients are willing, most are able and many prefer to operate the System themselves, with occasional technical assistance required. The Portland test has shown that it is possible to design an occupational information system which clients can operate technically.

The third issue, independent client interpretations, was not tested, rather, counselors were required by test procedures to evaluate and interpret results. They believe counselor interpretation of results to be the appropriate place for counselor participation, and recommend that as regular procedure.

## Counselor Time Required

Time estimated by counselors to gather comparable pertinent information must be distinguished from the total time spent by counselors with clients in using OIAS. During the test, counselors provided all the technical assistance to their clients and in many cases spent time observing their clients' use of the System. This was included by counselors as time spent. When counselors reported

that OIAS didn't save time but provided more information in the same amount of time, they were including the time they spent providing technical assistance as well as time spent observing the process.

The time reports of counselors show that they spent the same time with the System as their clients--about 40 minutes. As will be seen shortly, the reason lies in the test procedures, not in the demands of the System. Counselors were instructed to intervene at two places in the QUEST process, and were required to report additional information about client use of the information files. Thus, most counselors found it expedient to stay with their clients while they used the system, to counsel, assist, or observe. Counselors do not need to assist and observe, however. Since routine technical assistance can be provided by persons other than counselors, it is appropriate to limit comparisons to the amount of counselors' time required.

Reviewing the completed questionnaire with the client before using the terminal, and discussing the client's resulting list of occupational titles with him were the two steps where counselors thought some counseling and interpretation were necessary. For the first step, counselors reported that they spent a median time

of ten minutes with both non-disadvantaged and disadvantaged clients. For the later step, they spent a median time of two minutes with non-disadvantaged and five minutes with disadvantaged clients. From the brevity of time spent in both steps, it can be concluded that in a majority of cases counselors were mainly checking for obvious errors and misunderstanding of questions and screening for inconsistencies in the resultant list of occupational titles. Development of a more efficient means of providing technical assistance would significantly reduce the time spent by counselors observing and assisting clients using OIAS.

## Readability

While counselors reported some reading difficulties for a portion of disadvantaged clients, few such clients reported that they had difficulty. The following table reflects client responses to specific aspects of questionnaire usage.

Table 6 shows that clients consistently rated readability very high. There is little difference between the ratings of non-disadvantaged and disadvantaged clients. What difference there is follows the expected pattern. The proportion of clients rating the questionnaire easy to use is significantly higher than the proportion of counselors who assessed the questionnaire as presenting little or no problem of

TABLE 6

CLIENT RESPONSES ON EVALUATION
OF QUEST QUESTIONNAIRE

| | Non-Disadvantaged Clients | | Disadvantaged Clients | |
|---|---|---|---|---|
| | YES | NO | YES | NO |
| Easy to Read | 96% | 4% | 94% | 6% |
| Fun to Use | 90 | 10 | 86 | 14 |
| Asked the Right Questions | 80 | 20 | 84 | 16 |
| Related Jobs to My Own Likes and Dislikes, Values and Skills | 90 | 10 | 86 | 14 |

readability. However, counselors more frequently focused attention on technical considerations such as ambiguity and the adequacy of specific questions on the questionnaire. Thus, counselor assessments of readability are more comparable to client responses to the question whether QUEST asked the right questions. Ambiguity in certain questions and insufficient questions to delineate certain response categories were the most frequently cited weaknesses. In spite of these weaknesses and need for some revision, the vast majority of both non-disadvantaged and disadvantaged clients found

QUEST enjoyable to use and the resultant list of occupations relevant to their own abilities and preferences.

## QUEST List

The list of occupational titles produced by the QUEST was another focal point in the evaluation. The length of lists, client perception of the relationship between the questionnaire and list, and the extent to which the list provided new ideas, new information, and new alternatives were central factors. Responses were elicited from both clients and counselors on these aspects.

Though most lists were of useful lengths, a number of clients and counselors stated that particular lists were too long, while others were too short. Approximately half the counselors reported either that there was no problem with the length of the lists or that any confusion created by a long list could be resolved through counseling and interpretation. When a particular client received a list which seemed too long or too short, or when the client perceived the list as incongruous with his or her interests, clients often expressed the desire to fill out a second questionnaire, or to go back and be more specific on some answers. Examples of such instances reported by counselors included, "Client found that at the end of the first card-sort he needed to be more specific on the questionnaire. Therefore,

he went through it again;" "We did QUEST twice over two sessions as client had a very long list of occupations. Counselee felt he needed to think about it more carefully and do it again;" "Changed responses on questionnaire to narrow remaining choices;" and "The counselee wanted to and did go through two questionnaires to get better reflection of the possibilities for him. This seemed valid to the counselor as his final list with changes was actually more realistic for him."

These descriptive comments are representative of the use made of QUEST by most clients. They indicate that QUEST was creatively manipulated as a tool by the client rather than used in a rigidly mechanical fashion. These results allayed concern that clients might treat the results in a dogmatic and inflexible manner. They are also evidence that clients generally understood QUEST in the context of the occupational decision-making process. As one counselor stated, "Most clients use the list as a jumping off point."

Counselors were asked directly whether clients were inclined to take the lists too seriously, and whether the computer version posed a greater danger in this regard than the card-sort version. Eighty percent of the counselors thought that there was no danger of the client taking the list too seriously. But half of these counselors preferred that there be explanation or interpretation to insure that

the list was understood properly. About 20 percent of the counselors thought there was more danger with the computer version; however, none indicated whether counseling and interpretation would relieve this danger. Thus, they were judging the danger in the context of self-use by client alone. Additional counselor ratings and responses confirmed that the majority of counselors thought it was at least desirable, if not essential, for the counselor to be involved with the client in discussing his list, though mostly for other reasons.

There is no evidence in the responses of clients to indicate that the list was restrictive or taken too seriously. When asked to comment on the list, clients either remarked about the new occupations it contained, or suggested more, specific questions.

## Value of List

The amount of information provided by the questionnaire and list was an important consideration in assessing their value. When asked if the questionnaire and list gave them some new job titles to consider, clients' responses show that it was highly productive of new ideas. Table 7 summarizes these responses.

The vast majority of both non-disadvantaged and disadvantaged clients indicated they received new alternatives and possible new directions through use of QUEST. Ninety-one percent of the

TABLE 7

CLIENT RESPONSES WHEN ASKED IF THE QUESTIONNAIRE GAVE THEM SOME NEW JOB TITLES TO CONSIDER FOR FUTURE WORK

| | Non-Disadvantaged Clients | Disadvantaged Clients |
|---|---|---|
| Definitely Yes | 32% | 22% |
| Yes | 59 | 54 |
| No | 8 | 23 |
| Definitely Not | 1 | 1 |

non-disadvantaged clients reported this fact; the proportion of positive responses of disadvantaged clients was slightly lower, reflecting some real differences between the two groups which are elaborated later in the report. When asked what part of the System was most helpful, both non-disadvantaged and disadvantaged clients rated the questionnaire second only to the job descriptions. Descriptive comments of clients frequently emphasized the helpfulness of the information. Of special interest was the fact that next in frequency to comments on the value of the information, disadvantaged clients reported that it was easy to use, fast, and efficient.

The QUEST lists, though sometimes long, were useful in encouraging occupational exploration. As will be seen in the next section, they accomplished their principal purpose of stimulating use of occupational information sources. But they did more. In a large percentage of cases they made people aware of potential career fields they had neither known nor considered before.

## Counselor Evaluation of Each Item in QUEST Questionnaire

Detailed analysis of the QUEST questionnaire was a central objective of the follow-up interviews with counselors. Comments of counselors were sought on the questionnaire as a totality as well as on each question contained in it. Emphasis was placed on encouraging the counselor to express his or her suggestions for modifying and improving questions.

Counselors were generally satisfied with both the content and wording of QUEST questions. A large majority usually favored keeping the questions as worded. None was found to be grossly ambiguous, misleading or irrelevant, though some posed more problems than others. Only the vision and education questions elicited a preponderance of suggestions for change in wording. The sex and region questions were the only questions any counselors thought should

be dropped. No counselor indicated that the number of questions was too large, while six counselors suggested that more questions should be added either to include or expand upon such factors as interests, temperaments, and personality characteristics. Two counselors thought it would be helpful if GATB scores could be included, and one counselor suggested devising a means to include results of the Interest Checklist.

Counselor ratings and comments on individual questions follow. Only negative comments are listed. If counselors indicated satisfaction with a particular question, they were not asked to report the reasoning for their affirmative judgment.

| | Keep as is | Change | Drop |
|---|---|---|---|
| Physical Limitations | | | |
| 1. LIFTING Could you do medium or heavy work? That means a job where you lift 50 pounds or often lift and carry 25-pound objects. It also means lots of walking, standing, stooping, reaching, or moving things. (Responses: Yes; No; Could, but wouldn't want to; Don't Know) | 14 | 3 | 0 |

Comments: Counselors who suggested change thought there was some ambiguity in the question. One reported that some clients

| | Keep as is | Change | Drop |
|---|---|---|---|

didn't understand whether to answer the question in terms of ability or willingness to take a job involving lifting.

| | | | | |
|---|---|---|---|---|
| 2. | IMPAIRED VISION Do you have very bad eyesight? That is, are you unable to do close work; are you unable to tell distance, or are you color blind? (Responses: Yes; No) | 7 | 10 | 0 |

Comments: Counselors accepted the relevance of the question, but some pointed out that the question was ambiguous for persons who wore glasses or who have defective color vision only. Rewording has since corrected the problem with regard to glasses.

| | | | | |
|---|---|---|---|---|
| 3. | DEAFNESS Are you deaf or unable to speak? (Responses: Yes; No) | 12 | 5 | 0 |

Comments: Counselors who saw a need for change in the question indicated that no provision was made for varying degrees of partial hearing loss. However, since the Worker Traits do not provide information on degrees of hearing required, such rewording is impossible.

Location

| | | | | |
|---|---|---|---|---|
| 4. | REGION Where are you willing to live? (Responses: Lane County Area; Pacific Northwest; anywhere in the U.S.) | 14 | 2 | 1 |

| | Keep as is | Change | Drop |
|---|---|---|---|

Comments: Most counselors were satisfied with the question. One said the question should specify the city where the terminal or card-sort is located, and one desired a further breakdown of a large metropolitan area, e.g. Portland, into several districts within the metropolitan area. This is infeasible with present data sources. The counselor who suggested dropping the question said it was unnecessary.

| | | | |
|---|---|---|---|
| 5. CITY SIZE Some people want to work only in a large city; others want to work in a small city; others want to work in a small town. What size community are you willing to work in? (Responses: Large city; Large city or small city; Small city; Small city, small town, or rural area; Rural area; No preference) | 15 | 2 | 0 |

Comments: The same counselor gave the same suggestions for further breakdown of large metropolitan areas. The other counselor suggesting change indicated that some people had difficulty making up their minds on how to answer the question. The vast majority favored the question as worded, and none wanted it deleted.

| | | | |
|---|---|---|---|
| 6. WORKING CONDITIONS What kind of jobs would you take? (Responses: Indoors; Outdoors; No preference) | 15 | 2 | 0 |

| | Keep as is | Change | Drop |
|---|---|---|---|

Comments: Both counselors seeing a need for change said the item should include category of combined indoor and outdoor conditions. All wanted the question kept.

Sex

| | | | | |
|---|---|---|---|---|
| 7. | SEX Some jobs (such as barber) are mainly filled by men; others (such as nurse) are mainly filled by women. I want a job mainly filled by: (Responses: Men; Women; No preference) | 13 | 1 | 3 |

Comments: Counselors who judged it desirable to retain the question referred to the fact that from a counseling standpoint it brought out attitudes and hang-ups of clients, it made them think about significant situations, and brought the question out for discussion. The counselor who suggested change indicated uncertainty whether to keep it or drop it. He pointed out that some jobs traditionally filled by women, such as waitress and secretary, in fact may be jobs working primarily with men. Counselors reported that most clients checked question as "no preference." Of the three counselors who suggested dropping the question, one indicated no strong feeling about the question and the other two indicated the risk of stereotypes.

| | Keep as is | Change | Drop |
|---|---|---|---|
| **Education and Training** | | | |
| 8. EDUCATION How much training would you be willing to get? (Responses: No special education; High school; One year; Two years; Four years; Graduate) | 4 | 13 | 0 |

Comments: The vast majority of counselor criticism of this question indicated that it failed to distinguish between current achieved education level and willingness to pursue further education. Since many clients who completed the questionnaire were interested in the possibility of MDTA training, there was a marked tendency for the client to indicate interest in obtaining as much training as possible. It further failed to distinguish how much further education a person was able to attain based on his own financial resources. Note, however, that they all thought it important to keep the question.

| | | | |
|---|---|---|---|
| **Aptitudes** | | | |
| 9. WORKING WITH HANDS How good are you at doing fine work with your fingers and hands? Can you handle small things easily, quickly, and accurately? (finger dexterity) (Responses: Very good; Fairly good; Fairly poor; Don't know) | 17 | 0 | 0 |
| 10. EYE FOR ACCURACY How good is your eye for detail? Are you good at finding errors in words | | | |

| Aptitudes (Cont.) | Keep as is | Change | Drop |
|---|---|---|---|
| or numbers, or at copying material accurately? (clerical aptitude) (Responses: Very good; Fairly good; Fairly poor; Don't know) | 16 | 1 | 0 |
| 11. ABILITY WITH WORDS How good are you with words? Do you usually understand the meaning of words? Can you express yourself well in speaking and writing? (verbal aptitude) (Responses: Very good; Fairly good; Fairly poor; Don't know) | 15 | 2 | 0 |
| 12. ABILITY WITH NUMBERS Are you good with numbers? Can you do arithmetic problems quickly and correctly? (numerical aptitude) (Responses: Very good; Fairly good; Fairly poor; Don't know) | 16 | 1 | 0 |
| 13. CATCHING ON TO THINGS Do you catch on to things easily? Are you good at understanding instructions and the reasoning behind them? Are you good at figuring out things? (general learning ability) (Responses: Very good; Fairly good; Fairly poor; Don't know) | 17 | 0 | 0 |

Comments: There was general satisfaction with these aptitude questions. The two counselors who saw a need for change of two questions indicated reasons such as, people are too subjective, too likely to read in their own feelings about themselves,

| | Keep as is | Change | Drop |
|---|---|---|---|

and that the questions failed to delineate two of the abilities adequately.

Interests

Working with Things

| | | | | |
|---|---|---|---|---|
| 14. | PRECISION WORK Would you like to adjust and repair equipment or use instruments or tools to do precision work? Work in mechanics, metal working, office machinery repair, drafting, laboratory testing, the building trades, and sewing are precision work. (Responses: Yes; No; No preference) | 15 | 2 | 0 |
| 15. | OPERATING EQUIPMENT Would you like to operate machinery? This could mean running a wood-working machine, a computer, or office equipment; or it could mean driving equipment such as buses or bulldozers. (Responses: Yes; No; No preference) | 12 | 5 | 0 |
| 16. | HANDLING MATERIALS Would you like handling materials? You might start and stop machines, steadily remove materials from a machine, sort small parts, or move things from one place to another as in production work, logging, farm work, sorting and grading, assembly work, and stock work. (Responses: Yes; No; No preference) | 12 | 5 | 0 |

| | Keep as is | Change | Drop |
|---|---|---|---|
| Working with Information | | | |
| 17. INTERPRETING FACTS Would you like figuring out new ways of doing things, keeping track of a lot of things at once, analyzing information, and determining what to do? This includes jobs in management, medicine, engineering, teaching, law, repair work, etc. (Responses: Yes; No; No preference) | 15 | 2 | 0 |
| 18. ORGANIZING AND USING INFORMATION Would you like to gather information and put it together, and then know what to do with the information? People in office work, laboratory work, and in the building trades use information in this way. (Responses: Yes; No; No preference) | 15 | 2 | 0 |
| 19. COPYING, SORTING, AND PUTTING THINGS TOGETHER Would you like to copy or type, to follow step-by-step plans to make things? Would you like to compare and sort things? If so, you might consider jobs where you use information in this way. (Responses: Yes; No; No preference) | 13 | 4 | 0 |

Comments: Criticism of questions 14 through 19 by counselors was aimed at the same common themes. First, it was reported that it was difficult for clients to distinguish between questions within these two groupings. Second, the work examples posed

| | Keep as is | Change | Drop |
|---|---|---|---|

problems, with some questions needing more examples while others seemed to limit consideration because the examples were limiting. Some counselors thought there should be more delineation between questions. Questions 15 and 16 were most often cited as needing more delineation. Questions 17 through 19 tended to be judged as particularly difficult for clients to understand and answer.

Working with People

| | | | | |
|---|---|---|---|---|
| 20. | COUNSELING Would you like to be responsible for helping one person at a time find a solution to his personal, legal, medical or other problems? (Responses: Yes; No; No preference) | 13 | 4 | 0 |
| 21. | DISCUSSING, BARGAINING Would you like to exchange information and opinions or bargain with others to reach decisions about program, policies, and actions to be taken? Managers, health inspectors, and union bargaining agents, for example, spend a lot of time discussing and bargaining. (Responses: Yes; No; No preference) | 12 | 5 | 0 |
| 22. | TEACHING, SUPERVISING Would you like to teach things to people, to explain work procedures and to assign work to people? Would you like to keep up good working relations among workers and judge their work? Supervision, teaching, and | | | |

| | Keep as is | Change | Drop |
|---|---|---|---|
| recreation are examples of this kind of work. (Responses: Yes; No; No preference) | 14 | 3 | 0 |
| 23. SELLING, PERSUADING Would you like to sell or try to talk people into something? (Responses: Yes; No; No preference) | 14 | 3 | 0 |
| 24. ASSISTING Would you like a job where you have to be pleasant to many different customers or other workers while you give or get instructions? Waitress, sales clerking, stewardess, library, and reception work are examples of assisting jobs. (Responses: Yes; No; No preference) | 15 | 2 | 0 |

Comments: Counselors who suggested changes on items 20 through 24 reported difficulties with semantics and difficulties of clients distinguishing between these questions. Several counselors indicated that the word "counseling" was loaded and clients tended generally to want to help people so they responded positively to this item.

Earnings

25. MONTHLY WAGE How much must you make (for full-time work) before you would consider working in a job field? (Responses: Minimum wage; $350/month;

| | Keep as is | Change | Drop |
|---|---|---|---|
| $500/month; $700/month; $1,000/month; Not important at this time) | 11 | 6 | 0 |

Comments: The six counselors who said the question needed to be changed had three specific suggestions. They saw the need for more categories of rate levels, the need to state explicitly the band of wages in each category, and the need to distinguish between the rate of pay at which a person is willing to start and the final wage rate or salary on a career basis. All favored keeping the question.

# CHAPTER VII

## EVALUATION OF INFORMATION CONTENT AND FORMAT

Process and content are complementary aspects of information presentation. The impact of information on users of OIAS is a function of the process and format of information presentation as well as the actual content of the information. This is an extremely important fact which is generally ignored, but which has been brought home time and again during this project. In the previous section, evaluation of client use of QUEST showed that clients learned about the process of occupational decision-making from the questionnaire even though its ostensible purpose was merely reporting. Information process and content are obviously intertwined.

The QUEST list provides the typical starting point for users in obtaining detailed and specific occupational information. At that point in the process the user has four ways of obtaining specific information. Printouts of 300-word occupational descriptions are available for each occupation through the teletype computer terminal. An indexed bibliography and books provide additional detail.

Cassette tapes of interviews with people in a limited number of occupations were available for client use, providing impressionistic information about specific occupations. Lastly, an employer index shows the names of local employers and the number of persons working for the employer in given occupations.

At this point it is appropriate to present the proportional usage of the components of OIAS. The pattern of usage provides a comparison of information sources used by control and experimental group clients. Table 8 shows the frequency of usage of the specific information components of OIAS reported by clients in the experimental groups.

TABLE 8

FREQUENCY OF CLIENT USE OF SPECIFIC INFORMATION COMPONENTS OF OIAS

| Component | FREQUENCY OF USE | |
|---|---|---|
| | Non-Disadvantaged Clients | Disadvantaged Clients |
| QUEST | 100% | 100% |
| Job Descriptions | 95 | 88 |
| Bibliography and Books | 29 | 11 |
| Employer Index | 11 | 9 |
| Cassette Tapes | 6 | 7 |

All clients who participated in experimental groups used the questionnaire. Table 8 reflects the proportion of those who used QUEST and went on to use one or more components of the System. Non-disadvantaged persons were more likely to use multiple information components than were disadvantaged clients. The most definite difference was use of the Bibliography and Books. This difference was expected, since this component depended heavily on clients looking up and reading printed information.

## Descriptions

The occupational descriptions were the most frequently and most widely used specific information component. They also provided the most easily obtainable information. Typing "DESC" and an occupational code number into the terminal provided a printout of a concise description of the nature, the requirements, the characteristics and employment prospects of that occupation. Evaluation of the content and format of the job descriptions is based on specific ratings and descriptive comments of clients and counselors. When clients were asked to rate which component of the System, including the questionnaire, was most helpful, 60 percent of the non-disadvantaged clients and 52 percent of the disadvantaged clients rated the job descriptions

as most helpful. The following table shows how clients rated a number of characteristics of the job descriptions.

Obviously, the client is not technically qualified to assess the characteristics of completeness and accuracy of the information. Nevertheless, their perceptions are crucial and asking clients to report their perceptions of the information indicates the way in which technically correct information will be viewed by clients.

TABLE 9

CLIENT EVALUATION OF JOB DESCRIPTIONS

| | Non-Disadvantaged Clients | | | Disadvantaged Clients | | |
|---|---|---|---|---|---|---|
| | Yes | No | Don't Know | Yes | No | Don't Know |
| Accurate and Up to Date | 92% | 5% | 3% | 80% | 2% | 18% |
| Complete | 81 | 11 | 8 | 81 | 9 | 10 |
| Easy to Read | 99 | 1 | - | 93 | 7 | - |
| Fun to Use | 97 | 3 | - | 95 | 5 | - |
| Related the Job to My Own Likes and Dislikes, Values and Skills | 87 | 13 | - | 96 | 4 | - |

The fact that clients found the descriptions easy to read and fun to use, as well as easy to obtain, contributed to their popular and widespread usage. These factors coupled with the fact that most clients perceived them as complete, accurate, and personally relevant are fully consistent with clients' rating the job descriptions as the most helpful specific information component. The large number of disadvantaged clients who said they didn't know if the descriptions were "accurate and up to date," suggest that disadvantaged clients may have had less information prior to using OIAS against which to judge the information contained in the job descriptions.

Comments of counselors substantiate and further confirm these client ratings. Many counselors participating in the test reported that they found it definitely helpful to obtain as many printouts of job descriptions as possible for use in their own daily activity. For instance, several attached the descriptions to MDTA referral forms rather than having to research and write their own justifications. Counselors' opinions of the descriptions was unanimously positive and only a few noted minor deficiencies of content. The three counselors who indicated deficiencies commented that some of the descriptions were not of sufficient depth, that they should be related more to the local labor market, and that the amount of information on schooling included in the descriptions was limited. One

counselor thought that some of the descriptions were a little too long, but all others considered the length satisfactory or very good. No counselor had any suggestions for improving style and format of the descriptions or on the procedure for getting them.

Counselors indicated that their clients did not have any trouble understanding the descriptions, though one counselor reported that sometimes a little explanation was needed. These results are consistent with client ratings on ease of reading the descriptions.

Counselors were asked what effect the terminal had on clients' willingness to read the descriptions. They said: "It gave them something 'now' to look at and explore;" "The terminal enhanced the comprehension because they read it as it was typed out;" "(The terminal) motivated them to read;" and "They would sit there glued to it reading."

These comments emphasize the attractiveness of the teletype terminal usage and its utility in prompting even slow readers to read all that is printed out. This is a result of the pacing effect of the word-by-word printout process which enhances the effectiveness of the process and tends to insure that the information is read, understood, and utilized, especially since the printout is something tangible which the client can take with him. These effects are

fully consistent with and amplify clients' high ratings on the "fun to use" dimension.

Counselors were asked to rate the overall currency of information contained in the job descriptions. The following table shows how counselors rated the information.

All but one counselor considered the information in the descriptions definitely satisfactory. The one counselor who rated the information fairly poor emphasized the geographic factor, saying it was not local enough and not sufficiently current for local needs. This counselor remarked about the almost weekly change of local demands for specific occupations and referred to the sudden but temporary effects of labor disputes on local demand in specific occupations. It is apparent that this particular counselor was giving

TABLE 10

COUNSELORS' RATINGS OF CURRENCY OF INFORMATION IN JOB DESCRIPTIONS

| | |
|---|---|
| Very Good | 19% |
| Fairly Good | 75 |
| Fairly Poor | 6 |
| Very Poor | 0 |

heavy emphasis to immediate employment opportunity rather than longer range occupational decision-making.

In an attempt to discover specifically how the descriptions could be improved, counselors were further asked to rate the topics covered in the descriptions. In rating each topic, they were cautioned to ignore any information availability constraints. The ratings present probably the best available statement of what counselors expect in a good occupational description, as well as indicating how satisfactory the OIAS description format proves to be. Table 11 presents the results of those ratings.

Table 11 reveals that the vast majority of counselors found the content and topical coverage of the job descriptions satisfactory. While they were asked to rate length, they in fact were rating the adequacy of information content for each topic on the list. None indicated that any topics included were superfluous or unduly emphasized.

While the majority of counselors rated content of the job descriptions satisfactory on all counts, a portion indicated their desire to have more information on several topics. With the exception of wages and fringe benefits, counselors were almost unanimously satisfied with coverage of all topics concerned with the nature of the job

TABLE 11

COUNSELORS' RATINGS OF TOPICS OF INFORMATION CONTAINED IN OCCUPATIONAL DESCRIPTIONS

| Topic | Percent of Counselors Suggesting: More | Same | Less | Drop |
|---|---|---|---|---|
| Nature of Job | | | | |
| Function | 0 | 100% | 0 | 0 |
| Job Duties | 0 | 100 | 0 | 0 |
| Occupational Specialties | 0 | 100 | 0 | 0 |
| Working Conditions | | | | |
| Current Employment | 8% | 92 | 0 | 0 |
| Employers | 0 | 100 | 0 | 0 |
| Work Environment | 8 | 92 | 0 | 0 |
| Work Schedules | 0 | 100 | 0 | 0 |
| Organizations | 0 | 100 | 0 | 0 |
| Wages and Fringe Benefits | 23 | 77 | 0 | 0 |
| Qualifications | | | | |
| Native Qualifications | 31 | 69 | 0 | 0 |
| Legal Qualifications | 23 | 77 | 0 | 0 |
| Education, Training, Experience | 38 | 62 | 0 | 0 |
| Training Sources | 31 | 69 | 0 | 0 |
| Hiring Channels | 31 | 69 | 0 | 0 |
| Promotional Ladder | 31 | 69 | 0 | 0 |
| Employment Prospects | | | | |
| Demand | 31 | 69 | 0 | 0 |
| Supply | 15 | 85 | 0 | 0 |
| Supply/Demand | 15 | 85 | 0 | 0 |

and working conditions. Like everyone else, counselors commented that they would like to have more localized and more detailed wage rate information.

Qualifications for employment was the area where counselors most frequently and consistently indicated a desire for more information. Qualifications, together with wages and demand provide the information which is not only informative for exploratory purposes, but useful in determining the appropriateness of an occupational choice. (Since completion of the Portland test, additional information on training sources has been developed and included.)

Counselors' ratings and comments on job descriptions pose something of a dilemma. While asking for more information on some topics, counselors expressed almost unanimous satisfaction with the overall length of the descriptions. Only one counselor felt they were a little too long. Above a third of the counselors asked for additional information on a number of items, without compensating reductions in other items. The fact that a large majority of counselors found the topical coverage, as well as the overall length satisfactory, cautions against wholesale alteration of the descriptions. In drawing conclusions from this test, it is important to remember that the project resources went primarily to delivery system development, not to information development. It is actually quite encouraging that counselors and clients were as satisfied as they were with the information content of the information files during the test. The quality of the information content can be expected to rise when the

System is implemented permanently and information is maintained over a longer time period by means of a more consistent and sophisticated information development program. Improvements in information on a number of topics have already been made and included.

## Other Information Components

The remaining three information components of OIAS were used by only a limited number of clients during the test. Several factors contributed to this result. Most clients who used OIAS were satisfied with using the questionnaire, obtaining a list of occupational titles, and getting a few printouts of job descriptions. Only a small portion of clients desired more detailed information beyond that contained in the job descriptions or preferred the other media. It is also true that the Bibliography and Books, the Interview Cassette tapes and the Employer Index lacked the appeal of the computer terminal for the clients. The Bibliography and Books and the Employer Index required looking up references, which many clients were uninterested in doing. A number of counselors who participated in the test were not totally familiar themselves with usage of the Bibliography and Books and the Employer Index. In the follow-up interviews a number of counselors indicated that they didn't fully

understand the use of the Employer Index until late in the test. These factors contibuted to the small portion of the client population using these three information components. However, sufficient usage was made of these components to provide data for some conclusions.

## Bibliography and Books

Seven of the seventeen counselors who participated in the test indicated that either they didn't use the Bibliography and Books at all, or they used them so little they could not comment on their use. The remaining ten counselors confined most of their comments to general impressions and reactions.

Comments included such statements as: "I think it was good. We did a good job of using everything (occupational information publications) we had available in the resource room;" "Fantastic, marvelous;" "Bibliography was a tremendous help;" "Adequate. Found some people wanted to use it. Generally, the type of client we get (is) not interested in reading;" "This is the point where most of them dropped out. Only had two who used it and they were both college students. General run-of-the-mill client doesn't have long enough attention span;" "A few people can handle these things. Most of them are out working now;" "I think the best thing is the Occupational Outlook Handbook. I didn't get a great deal out of the

rest. Don't know if the clients used it to any degree at all;" and, "They're time consuming (but) worthwhile if the client really wants to dig into something."

The counselors who commented in more detail on the Bibliography and Books all thought this component worth continuing and considered the publications included sufficiently comprehensive although somewhat repetitive. These counselors further thought that the bibliography furnished a good reference tool for counselors, even if few clients used it. They indicated satisfaction with the format as well as the content.

A total of 35 clients reported that they used the Bibliography and Books. Of these clients, six rated this component of OIAS as the most helpful. Thirty clients rated a set of characteristics of this component. Table 12 shows these client ratings.

Table 12 reveals that the vast majority of clients who used the Bibliography and Books found them helpful. These ratings must be tempered by consideration of the relatively small number of clients who used this information source. It is also important to point out that clients who used this component are not representative of the total client population. As counselor comments indicated, only clients who were willing to "dig for information," and who were sufficiently motivated to search independently, used them in the first place.

TABLE 12

EVALUATION OF BIBLIOGRAPHY AND BOOKS BY CLIENTS WHO USE THIS COMPONENT

| Respondents | Non-disadvantaged Clients | | | Disadvantaged Clients | | |
|---|---|---|---|---|---|---|
| | Yes | No | Don't Know | Yes | No | Don't Know |
| (Percent who used this component = 16% of TOTAL Experimental Group Clients) | | | | | | |
| Accurate and Up to Date | 86% | 5% | 9% | 78% | 11% | 11% |
| Complete | 90 | 5 | 5 | 67 | 33 | 0 |
| Easy to Read | 90 | 10 | 0 | 78 | 22 | 0 |
| Fun to Use | 91 | 9 | 0 | 67 | 33 | 0 |
| Related Job to My Own Likes and Dislikes, Values and Skills | 89 | 11 | 0 | 89 | 11 | 0 |

Although only a small proportion of clients used this information component, client ratings and counselor comments indicate that it is a worthwhile component, and should remain available to that select portion of clients who find it helpful and are able to use it.

## Occupational Interview Cassettes

Only eleven clients reported using the interview cassette tapes. At the beginning of the test only 17 occupations were available on the tapes, a fact which obviously constrained their usage severely, even though the number doubled by the end of the test. Some of the tapes used were obtained commercially, while some were developed by project staff. There were some significant differences in length, format, and credibility between the two sets of tapes, with those produced by the project being much superior; unfortunately, one cannot generally separate comments about those from comments about the poorer, commercial tapes.

Most counselor comments were stated in terms of general reactions. The comments of the eleven counselors who did use them were as follows:

> "Very limited in number I think. They could be expanded (more cassettes) . . . but cassettes used were fine."
>
> "They were stolen. I don't know how you control that. Thought they were gimmicky and expensive. Suggest money (should be) used for better books, pamphlets, and give away stuff. Have more printouts available."
>
> "There was a problem of having them out for use. I liked to use them because you could hear people talking, but had trouble getting kids to use them. They didn't seem to want to take the time to use them."

"Very limited. Some were too long for attention. Had very few who used them."

"Some were well done, others bored people. Effective for some."

"A good idea but not enough fields covered."

"Nothing really exciting in this part of System. Found client reaction a real either/or situation; either quite interested or else didn't want to hear it. Don't know why."

"I invited people to use them and there were some people who spent some time with them. Others listened for a second or two. I do think they are aimed at the high school student level."

"I listened to a few. See some value in them, but a lack of sufficient number."

"I think they would be good with groups."

"Not enough there at the time. I've used them before and have had good success with them. Sometimes the cassettes work better than just having them read."

These comments represent a considerable range of reactions. One counselor, already quoted, thought the cassettes should not be maintained in the System; another expressed doubts about their usefulness in terms of the very small number of clients who used them; while the rest of the counselors who commented thought they were useful and should be retained in the System. However, all had suggestions for improving their use. Expansion of the number of cassettes available was a common suggestion. Shortening the length of some cassettes was mentioned by a few counselors.

(Project cassettes are about half as long as the commercial ones.) No counselor reported that clients had any trouble using them, although the fact that some were stolen points up a procedural problem. Two counselors made specific references to the fact that the cassettes were useful with clients who had reading difficulties.

A small number of clients rated their experiences using the cassettes. These ratings must be considered as only impressionistic and cannot be considered at all representative even of those who used the tape cassettes. Table 13 presents the results of client ratings. It is interesting that more disadvantaged persons used them, even though the tapes had to be checked out and were not openly available near the terminal.

More thorough testing is needed to determine if any real differences in effectiveness exist between disadvantaged and non-disadvantaged clients. The only descriptive comments of clients were: "told counselor that the tapes had too much irrelevant information for economic use of time. The Occupational Outlook Handbook was better;" "very interesting;" "more selection;" and "wasn't interested." These ratings and comments present the same mixed picture as counselor comments. Unquestionably, there are

TABLE 13

CLIENT EVALUATION OF INTERVIEW CASSETTE TAPES

| Respondents | Non-disadvantaged Clients (N=4) Yes | No | Disadvantaged Clients (N=7) Yes | No |
|---|---|---|---|---|
| (Percent who used this component: 5%) | | | | |
| Fun to Use | 100% | 0 | 83% | 17% |
| Easy to Understand | 100 | 0 | 86 | 14 |
| Gave a Good Idea of What The Work was Really Like | 100 | 0 | 86 | 14 |
| Related Job to My Own Likes and Dislikes, Values and Skills | 100 | 0 | 71 | 29 |

advantages and usefulness of this part of the System, but in individual counseling situations they are not a high use component. Their best usage seems to be with groups.

Some additional evaluation of the interview cassettes was gained when a set was sent to the Tacoma Ghetto Job Information project. They were reviewed by Employment Service counseling and job placement staff as well as being tested in some high schools. Employment Security staff felt the tapes would not be helpful with job ready clients, but they did feel that they would be helpful to

young entry workers being referred to trainee positions and with clients in general during vocational exploration or orientation prior to career counseling.

When the tapes were used in several live demonstrations before high school audiences, students were "attentive and enthusiastic." The Tacoma Job Ghetto Information staff said students found them very interesting and helpful and were particularly interested in the economic information provided. This additional test of the interview cassettes confirms the broad appeal of the cassettes in school or other group settings. However, their value in individual counseling seems limited to certain kinds of clients at specific points in the vocational exploration process.

## Employer Index

Usage of the Employer Index was also reported by a limited number of clients. Three of the eighteen clients, both non-disadvantaged and disadvantaged, who used it rated it as the most helpful component of the total OIAS System. Counselors, who used it themselves reported that it was a helpful source of information in their own work. One specific problem with the Employer Index in the test was lack of counselor understanding of its use. Another difficulty was office policy regarding the use of the Index. Counselors

were instructed that the Employer Index was confidential information and not to be turned over to clients for their own use. Rather, counselors were to use it themselves and relay the appropriate information to the client. However, some counselors apparently saw an awkwardness in this procedure and allowed clients to use it directly to copy down names of potential employers. All counselors who followed this procedure noted that they explained to clients that the listing of potential employers was not evidence of any present job openings.

In spite of limited use, counselors unanimously commented that it was a useful tool and worth continuing as a part of the System. Those counselors who used it frequently saw it as very useful and valuable while counselers who used it only a little tended to emphasize that it was difficult to use. Two counselors suggested that they would like to have had more specific instruction and orientation in use of the Employer Index.

It is certainly true that use of the Index could be simplified by some additional work on design and format. That was recognized when the Index was created, but was infeasible at that time.

No specific evaluation or descriptive comments were obtained from clients on the Index. Counselor comments about client use, although extremely limited, reveal a definite lack of interest or

reluctance of many clients to use it. This is consistent with evaluation of usage of the Bibliography and Books and the Interview Cassette tapes. Those few clients who definitely wanted the detailed information available in these components found them helpful, while most clients were satisfied with the information contained in the job descriptions, and thus did not use the other information components.

## Client Satisfaction with Information

Results of the Portland test indicate that the information components of OIAS provide satisfactory information content in effective, yet varied formats. Very few clients using OIAS fail to obtain the information they desire. Most clients are very well satisfied with the information contained in the widely popular Job Descriptions, which have proven to be the heart of the System, and most saw no need to use the additional components. However, for about 10 percent of the clients with somewhat differing information demands and different media preferences, the Bibliography and Books, the Interview Cassettes, or the Employer Index provide the additional means to obtain the particular information to fill their special needs. The System would be functional without these three components, but perhaps ten percent of the clients would miss what is, for them, the most helpful part of the System.

# CHAPTER VIII

## DIFFERENCES BETWEEN CONTROL AND EXPERIMENTAL GROUPS IN SOURCES OF INFORMATION AND TIME REQUIRED

While the experimental groups were using the OIAS files, another (control) group of clients was getting information from counselors in the usual way. The differences in information sources used by control and experimental groups reveal further differences between the traditional counseling process and the counseling process when a systematized information access process is utilized.

### Sources of Information Used With Control Group

Counselors were asked to name the publications and sources of occupational information they used with each client in the control group. Most counselors listed more than one source of information. The following table ranks these sources according to their frequency of use.

TABLE 14

INFORMATION SOURCES AND THEIR FREQUENCY OF USE WITH CONTROL GROUP CLIENTS

| Information Source | Frequency of Use |
|---|---|
| Dictionary of Occupational Titles | 31 |
| Occupational Outlook Handbook | 31 |
| College Catalogs | 31 |
| General Aptitude Test Battery Testing and Interpretation | 27 |
| Apprenticeship Information Center Publications (Resource Room)* | 16 |
| Job Bank Book | 15 |
| Pamphlets and Miscellaneous Publications | 15 |
| Interest Checklist | 10 |
| Civil Service Publications | 10 |
| Current Labor Market Information | 5 |
| Miscellaneous Publications** | 13 |

*Refers to use of occupational materials assembled and available for client use at the Youth Opportunity Center. A variety of pamphlets, leaflets, and reference materials are available for client use in one room.

**This category includes "Encyclopedia of Careers" (cited twice), Stanford Interest test (cited twice), "Portland Manpower Survey," "Mapping Your Education," "College Placement Annual" and private school source material (each cited once).

Counselors reported using two information sources, on the average, with each client. The preceding table shows that counselors rely on a limited number of information sources. The first four sources listed are consistently the most widely used, but none

of them is used more than a third of the time. Of all sources listed, the Occupational Outlook Handbook is the only publication which provides comprehensive information for specific occupations. Of the four most frequently used sources, it is the only source that provides any supply and demand information, and even the Occupational Outlook Handbook must often be tempered by local labor market information in order to adequately determine local opportunity. The other sources are limited to specialized and limited aspects of occupational information.

A few counselors reported that they used no published sources, but provided occupational information from their own personal knowledge or from telephone calls to schools, other agencies, and employers. Counselors working with clients in experimental groups were not queried on sources of information utilized, but it can be assumed that they communicate their personal knowledge and make personal contacts while working with clients whenever it is appropriate. Thus, the use of personal knowledge can be considered a constant factor for both control and experimental group counseling activity. The differences in information sources between control and experimental groups consist of differences between the published information sources listed in Table 14 for the control group and the systematized information files contained in OIAS. Clients in the

control group were not queried, so there is no way of determining what information those clients actually read, investigated, or utilized except by inference from the information sources counselors reported using. Consequently, it is not possible to determine whether clients in the experimental groups sought more information than clients in the control group.

In the experimental groups who used OIAS, itemization of particular books was reported in the counselor evaluation of usage of the Bibliography and Books. This component received limited use by clients because the OIAS descriptions are the first choice information source of OIAS users, but, when it was used, the Occupational Outlook Handbook was the most frequently used book with OIAS as well as in the traditional counseling process.

The job descriptions were by far the most widely used OIAS information component. The content of the descriptions is somewhat parallel to the coverage of topics in the Occupational Outlook Handbook. Both sources provided comprehensive coverage of a wide range of specific occupations, and do so in a corsistent format. However, the information in the job descriptions is far more succinct, geographically localized, and up-to-date. Clients also rate them easier to use. When given a choice, clients chose the OIAS descriptions first, then turned to the Occupational Outlook

Handbook. The general appeal and value of the occupational descriptions is further substantiated by the fact that 90 percent of all users rated them as the most helpful of the OIAS information files (not counting the questionnaire).

## "Orange Flowered Box" File

One source of information used with both control and experimental groups at the Youth Opportunity Center (YOC) deserves special mention. YOC has a specific resource room containing occupational information. Within the room is a set of files which their staff refer to as the "Orange Flowered Box" file, which contains files (in boxes printed with orange flowers) of pamphlets and articles on specific occupations. This is a valuable information source for clients and is widely used.

The "Orange Flowered Box" file was listed on the Bibliography in all three offices. It was physically available only in the YOC office, so clients from the Adult Opportunity Center (AOC) or the Concentrated Employment Program (CEP) would have to travel to the YOC office to use it. This situation provided an opportunity to discover whether people would travel across town to use such a source. No counselors or clients reported that anyone from AOC or CEP did so. Thus, if such files of printed information are to be

developed, they must be conveniently located, presumably in each office where clients might want to use them.

## Efficiency of Information Presentation

Efficiency is a vital element in information presentation, and access time is an essential consideration in determining the value of an information system. OIAS presented occupational information in a more unified, integrated, and straightforward manner than the traditional counseling process, and it also delivered more information in the same amount of time.

Estimates of the amount of information access time were gathered from counselors and experimental group clients. Counselors were asked to estimate the amount of time it would have taken to obtain equally adequate information to use with each client in the experimental groups if OIAS had not been available. The median time reported for both non-disadvantaged and disadvantaged clients was 60 minutes. That is, counselors thought it would have taken them an hour to find the information their clients got from OIAS. In a few instances, counselors indicated they would never have been able to obtain the same amount of information.

Clients were asked to estimate the amount of time they spent using the System. The median estimated time was 40 minutes for non-disadvantaged clients and 38 minutes for disadvantaged clients. Thus, within 40 minutes clients were able to obtain information which, on the average, would have taken a counselor 60 minutes to assemble, and additional time to deliver.

The median time spent by clients in using the System can be considered the average time required to complete the questionnaire, obtain a list of occupational titles, and obtain one or more specific job descriptions. The majority of clients did not seek additional information from the other components of the System. Usage of those components would require more client time, but, from the viewpoint of staffing, time spent by counselors is the primary concern. Counselors generally agreed that independent client use of the Bibliography and Books and the Interview Cassettes would pose no problem for those clients capable and desirous of using them.

Counselors' general comments during follow-up interviews indicated OIAS usage generally did not save great amounts of time, when compared with the time usually spent on information delivery, but made more and better quality information available within that time. Because these comments were not generalized and made after the test was completed, they reflect the total time required to use

OIAS under normal use conditions better than the time logged on the various steps of the test. The lack of adequate scheduling of terminal usage, the inefficient, temporary location of the terminals in the offices, which forced counselors to run back and forth from their work areas, and the fact that counselors provided all the technical assistance to clients using the System all consumed counselor time during the test. Thus, if OIAS were installed in these offices on a permanent basis, adequate scheduling and development of procedure, which would integrate OIAS into ongoing office operation, would likely result in a reduction in the 40-minute estimate of counselors' staff time spent per client.

# CHAPTER IX

## COMPARISON BETWEEN COMPUTER AND CARD-SORT VERSIONS

Two alternative processes for obtaining a list of occupational titles and job descriptions were used in the Portland test. One is the computer version of OIAS; the other is a manual, card-sort version. Both use the same QUEST questionnaire; the difference between the two versions lies in the procedures for obtaining the list of occupations. Whereas clients in the computer group typed their responses into a teletype terminal, clients in the card-sort group used a long needle to sort a stack of cards. Each card contains a job description for a specific occupation. When the client finishes sorting the cards, those remaining in the stack are the same occupations printed out on the terminal in the computer version.

Utilization of these two methods for delivering occupational information provides a comparison of their relative merits. The major dimensions considered are: the relative effectiveness and ease of usage of each version, the amount of time required of counselors and clients to use each system, client understanding of

the processes, and the extent to which clients were able to utilize the information obtained from each. Analysis of data points out advantages and disadvantages for each version.

While the card-sort has all the job descriptions of occupations remaining in a client's stack immediately available, the computer version requires the user to request the printouts of job descriptions from the terminal one at a time. There are two important factors involved here. First, the card-sort system delivers more information (descriptions for every occupation on his list) than the user is interested in reading. Secondly, the attractiveness of the terminal is not matched by any feature of the card-sort version. This directly affects the client's willingness to read the descriptions. Clients are more likely to read carefully the descriptions in the computer version. (Additionally, job descriptions in the computer version can be easily updated; whereas the individual cards in the card-sort version must be reprinted and replaced individually.)

Counselors described their clients' reactions to the computer version as positive. This was true for disadvantaged as well as non-disadvantaged clients. Counselors said that clients were:

"Enthusiastic."

"Enjoyed it."

"Was intrigued by the terminal." (disadvantaged)

"He was fascinated, stimulated; we related better as a result of sharing the experience, even though we had rapport at the outset." (disadvantaged)

"This man was very enthusiastic. It caused him to drop his smooth, 'not a care in the world' attitude, and we really got down to the fact that he was quite a depressed man, with very good reason."

"Very good--he had no trouble in handling this on his own--counselor checked every so often and he was progressing very well." (disadvantaged)

The same reaction occurred with the card-sort, when used by non-disadvantaged clients. But, disadvantaged clients were generally unimpressed with the card-sort. The reasons for lack of interest in the card-sort by disadvantaged seems to be the failure of this medium to motivate these users.

The great attractiveness of the terminal in client use was most apparent in the reading of job descriptions. Counselor comments strongly indicated that clients read all the job descriptions which they ordered from the terminal. The word by-word printing process paced clients' reading of these descriptions, and this is a major, frequently noted advantage. The attractiveness of the terminal and the immediacy of the information in the computer version provides assurance that clients will use it independently.

The card-sort produced much less consistent results. When counselors were asked if clients usually read most of the descriptions

on the cards that remain on their list, 60 percent of the counselors stated that clients didn't, 33 percent reported that clients read most remaining descriptions, while only one counselor stated that clients read them in detail. Typically, the client would skim through the cards remaining in his deck, look at titles and select and read only those of interest to him. Clients usually sorted the cards at the counselor's desk, and that fact had some influence on the clients' persistence in using the card-sort. This fact also explains the divergence of counselor opinion as to whether clients read the descriptions. Thus, a disadvantage with the card-sort version is the uncertainty whether clients will read the descriptions sufficiently carefully to obtain information essential to their occupational decision-making.

In the follow-up interviews, counselors were asked to compare the two versions and give their general reactions. Ten of the seventeen counselors participating in the test preferred the computer version and thought it was more effective than the card-sort. Only one counselor expressed preference for the card-sort version, saying she personally liked the card-sort better, but the computer was in fact a more attractive, effective version for her clients. The remainder remarked that each version has some advantages and disadvantages, but most of them considered the computer version more efficient.

In these comments the attractiveness and efficiency of the terminal were the characteristics most often mentioned. Frequent comments about computer down-time revealed this as the major disadvantage of the computer version during the test. In some instances, the computer went down after the client had started entering his QUEST responses. Most of the inconvenience centered on clients not being able to use the terminal immediately and sometimes having to return another day to complete the process. This is, of course, a fault of the computer system being used, rather than the OIAS program, but it does highlight the necessity of computer reliability.

Ease of usage was another advantage of the computer version reported by counselors. Even those who expressed a mixed reaction in comparing the alternative versions thought the terminal easier for clients to understand and use.

The main advantage cited for the card-sort was its greater effectiveness in showing the client what was happening in the sorting process and how each response affected the outcome. The most frequently mentioned disadvantage of the card-sort was its cumbersomeness. Cards tended to stick together and sometimes didn't drop out properly.

Returning to clients' evaluations, their assessments of the Job Descriptions show some differences which are also a function of the version of the System used. Clients definitely thought the descriptions were easier and more fun to read when the computer version was used. The impact of the computer medium is evident in the clients ratings of the popular occupational descriptions.

TABLE 15

CLIENTS' EVALUATION OF
OCCUPATIONAL DESCRIPTIONS

| | Definitely Yes | Yes | No | Don't Know |
|---|---|---|---|---|
| COMPUTER GROUP | | | | |
| Accurate and Up to Date | 33% | 57% | 5% | 5% |
| Complete | 35 | 50 | 10 | 5 |
| Easy to Read | 41 | 55 | 4 | 0 |
| Fun to Use | 45 | 54 | 1 | 0 |
| Related to My Own Likes and Dislikes, Values and Skills | 32 | 57 | 11 | 0 |
| CARD-SORT GROUP | | | | |
| Accurate and Up to Date | 21 | 59 | 3 | 17 |
| Complete | 13 | 64 | 8 | 15 |
| Easy to Read | 28 | 67 | 5 | 0 |
| Fun to Use | 21 | 72 | 7 | 0 |
| Related to My Own Likes and Dislikes, Values and Skills | 24 | 63 | 13 | 0 |

Clients gave a consistently higher rating for the descriptions delivered via computer, including rating it higher on accuracy, completeness, and relevance. These differences primarily reflect differences in the attractiveness of the two versions, because the informational content was very similar, with the single exception that the descriptions delivered by card-sort were not as highly localized or as frequently updated.

Clients' ratings of how they liked information they received from OIAS further substantiates this difference. Again, the responses refer more to the relative appeal of the processes than the content of information. Table 16 reflects these ratings.

TABLE 16

CLIENTS' RATINGS OF HOW WELL THEY LIKED INFORMATION THEY RECEIVED FROM OIAS

| | Computer Group | Card-Sort Group |
|---|---|---|
| Like It Very Much | 47% | 31% |
| Like It | 47 | 61 |
| Dislike It | 5 | 7 |
| Dislike It Very Much | 1 | 1 |

Over 90 percent of the clients liked the information, regardless of the method they used to access it, but, again a substantially higher proportion of those using the computer version expressed strong liking for the information. On the negative side, there are only slight differences between the two groups in the percentage of negative responses, with the exception of the "fun to use" category in Table 15.

Another index of ease of usage were clients' reports of trouble using OIAS. Eighteen percent of clients in the computer group reported having some trouble using OIAS, while only 9 percent of the card-sort group had difficulty. While there appears to be a significant difference between the two groups on this point, these ratings are inconclusive. Computer down-time was already mentioned as a recurrent problem during the test and certainly is reflected in clients' reports of difficulty. It is not an inherent difficulty in the design of the OIAS system, however. Because of the frequency of this mechanical problem, it is difficult to separate it from difficulties experienced by clients in understanding and following the instructions.

A similar problem is encountered in the card-sort. The tendency of the cards to stick together caused frequent sorting problems, as reported by many of the participating counselors.

This again is a straightforward mechanical problem, which can be corrected by using different card stock. Thus, with both versions, the amount of trouble with procedures and instructions in the process itself is partly obscured by mechanical problems, but comments of clients help identify some of the problems. Those who had trouble using the System were asked to describe their difficulty. A few reported some problems with the questionnaire and a number of disadvantaged clients cited reading and understanding the instructions as the specific problem.

The remaining comments pertained primarily to the mechanical and procedural difficulties noted above. The only two comments identifiably linked with the card-sort version referred to the cards sticking together. Computer down-time was specifically noted in several instances and a number of minor problems were cited for the computer version, most commonly by disadvantaged clients. The following comments of clients describe such problems: "I forgot to type in HELLO. I also had some minor problems figuring out what key to punch;" "Locating keys . . . not a typist;" and "I forgot to put in the period." These are relatively minor problems which can be solved quite simply with routine technical assistance at the terminal site.

## Usefulness of Information

Differences in the usefulness of information provided by the two versions can be gleaned from clients. Results show that both versions effectively assist clients in making job plans. There are only slight differences in the usefulness of information received from each version. Sixty-eight percent of clients using the computer version reported that they were helped, while 64 percent of the clients who used the card-sort indicated OIAS helped them. Overall, a strong majority of clients who used the System indicated they received definite help.

However, the relatively high percentage of clients who reported not being helped needs explanation. Clients tended to answer this question in terms of whether they received sufficient information to make a definite choice or take a step in the occupational decision-making process. This is further clarified and substantiated by client responses to the question whether they liked the information they received from OIAS as shown in Table 16.

The ratings on "liking" reflect the personal relevancy and usefulness of the information as well as the attractiveness of the process of obtaining it. All these factors are necessarily subjective and the responses on the part of clients are impressionistic. However, the responses of clients who reported that OIAS helped them make job

plans indicate that useful information was communicated either in the process of filling out the questionnaire and getting a list or from the information obtained from the information components. Usefulness and helpfulness are closely related dimensions. Of course, the ultimate criterion of the usefulness of information is whether it significantly affects the labor market behavior of persons who use the System, but that kind of evaluation is beyond the scope of the present study.

A very high proportion of clients reported that they liked the information and found it useful; although it may not have resulted in a definite and immediate step in making job plans. The lower proportion of clients who indicated they were helped in making their job plans as compared to the clients who reported that they liked the information, reflects the differences between clients who made definite decisions and those who didn't but still found the information sufficiently relevant to consider. A greater proportion of clients who used the computer version reported liking the information very much; however, clients overwhelmingly liked the information from both versions.

## Summary

Both versions of OIAS are effective and efficient means of providing occupational information, although both have some minor mechanical problems. Time is saved in finding pertinent occupational information. The computer is appreciably more attractive to clients and preferred by counselors; while the card-sort requires more technical assistance and direction. Solution of the minor mechanical problems and development of a procedure for providing routine technical assistance will further enhance the effectiveness of both versions.

# CHAPTER X

## DIFFERENCES BETWEEN NON-DISADVANTAGED AND DISADVANTAGED CLIENTS IN USAGE OF OIAS

Evaluation of differences between non-disadvantaged and disadvantaged clients in OIAS usage was an important dimension of investigation. At issue was the ability of disadvantaged clients to operate and benefit from the System. (Previous investigation had shown the System's value, but had not differentiated these groups.)

Care was taken to insure that both disadvantaged and non-disadvantaged clients were included in the control and experimental groups, and that they received comparable treatment. Counselors recorded each client's disadvantaged status along with other client characteristics, but otherwise made no distinction between disadvantaged and non-disadvantaged. The grouping of clients as disadvantaged and non-disadvantaged was done at the stages of data compilation and analysis only, and thus, presumably did not influence counselor responses. Clients were classified by counselors as disadvantaged or non-disadvantaged on the basis of Federal criteria currently used by the State Employment Division.

In general, the OIAS System proved effective with both groups, but within the broad category of disadvantaged, it is necessary to identify the severely disadvantaged. In this test, the greatest problems emerged among those disadvantaged persons who had severe educational and reading deficiencies. Those who had serious trouble operating the System are those who, according to responses, had definite reading difficulties. Counselor comments in follow-up interviews made reference to the inappropriateness of OIAS for persons with extremely poor or no reading skills.

Unfortunately, the test did not produce precise criteria for identifying clients for whom OIAS is inappropriate. Test data, both reading skill level and GATB, were collected for all clients participating in the OIAS evaluation, when such test results were available as a result of normal counseling procedure. However, the differences in tests present insuperable problems of analysis. The Concentrated Employment Program administered the Wide Range Achievement Test to almost everyone entering the program, but this instrument was not used in either of the other two offices. The YOC and AOC use reading tests infrequently, and when they do, they use forms of the ABI E. Both use the GATB widely, but at the Concentrated Employment Program (CEP) the GATB is used less frequently. When the GATB is used at CEP, it is generally

with clients who appear capable of doing sufficiently well on it. The NATB is rarely used. To compound these problems there were few severely disadvantaged clients with severe reading problems within the total disadvantaged group. (This may have reflected in the choice of clients for the test; though counselors reported no such selective activity.) Thus, no aptitude or reading level prerequisites for use of OIAS can be set, though it is known that persons with extremely poor reading skill do have trouble operating OIAS alone.

A more general analysis of differences between the two broader groups of disadvantaged and non-disadvantaged is traced through client and counselor responses to major aspects of the total system.

The overall effectiveness and usability of OIAS for disadvantaged and non-disadvantaged clients depends upon the clients' and the counselors' purpose for using OIAS. The crucial questions, then, are whether it helps clients move toward or reach their objectives, to what extent it helps them make job plans, and whether the client finds the process and content of information presented satisfactorily and relevant. Differences along these dimensions point out the different patterns of use and the relative effectiveness of OIAS for disadvantaged and non-disadvantaged clients.

In the evaluation, each client who used OIAS was asked to report his or her purpose for using OIAS, and there was a distinctly

different pattern of reasons for using OIAS given by disadvantaged and non-disadvantaged clients. Table 18 shows the pattern of responses.

Many disadvantaged clients claim to be job seeking, and thus seem to be more decided and definite about their occupational choices, whereas the majority of non-disadvantaged clients used OIAS to help decide what occupation to follow.

This significant difference raises a crucial question which was not directly addressed in this evaluation. What amount and quality of occupational information was possessed by clients prior to OIAS usage? On the basis of general characteristic differences between disadvantaged and non-disadvantaged populations, one would suppose that the quantity and quality of occupational information possessed by disadvantaged persons is significantly less than the information possessed by non-disadvantaged persons. The lower level of formal education, the less amount of job skills, the greater amount of unemployment and sporadic employment and job discrimination are general characteristics of the disadvantaged population which decrease exposure to knowledge and information about occupations. Perhaps for this reason, perhaps for more basic cultural reasons, there appears to be a significantly different pattern and logic to the decision-making process between disadvantaged and non-disadvantaged

clients. Aware of the complexity and range of occupational choice facing them, non-disadvantaged clients reflect a high degree of indecision and lack of certainty. In addition, long-term planning and decision-making is more characteristic of non-disadvantaged persons. This is consistent with the high proportion who reported they were undecided about what occupation to follow.

The client's evaluation of the usefulness of OIAS is obviously made in context of the purpose for which the client used it, whether exploration or confirmation. Table 17 summarizes these responses of clients regarding the extent to which OIAS helped them make job plans.

Table 17 shows definite differences in responses between disadvantaged and non-disadvantaged clients. A smaller proportion of disadvantaged indicated they were helped in each category of purpose. Interestingly, the least differences between client groups existed when they indicated they were undecided and thus interested in exploration. Here the System was nearly as effective with disadvantaged as non-disadvantaged persons. However, for those non-disadvantaged clients who indicated they need information about some specific occupation they had in mind, 90 percent reported receiving help. Disadvantaged clients looking for a job were the group reporting being least helped.

TABLE 17

CLIENTS' RATINGS OF HELPFULNESS OF OIAS IN MAKING JOB PLANS ACCORDING TO CLIENT PURPOSE FOR USING IT

| Reasons Used | Total Clients | Definitely Yes | Yes | No | Definitely Not |
|---|---|---|---|---|---|
| Non-Disadvantaged | Total=78 | | | | |
| A. Looking for a job | 20% | 19% | 62% | 19% | 0% |
| B. Had some future occupation in mind that I needed to find out more about | 13 | 20 | 70 | 10 | 0 |
| C. Undecided about what occupation to follow | 67 | 15 | 54 | 21 | 10 |
| Disadvantaged | Total=102 | | | | |
| A. Looking for a job | 41% | 24% | 33% | 36% | 7% |
| B. Had some future occupation in mind that I needed to find out more about | 31 | 18 | 44 | 32 | 6 |
| C. Undecided about what occupation to follow | 27 | 18 | 43 | 28 | 11 |

The fact that many more disadvantaged were job seeking and over twice as many disadvantaged clients as non-disadvantaged clients had some future occupation in mind that they wanted to find

out more about is also consistent with the difference in patterns of purpose. These responses tend to substantiate the conclusion that disadvantaged persons have less prior occupational information upon which to make judgments, so they decide upon an occupation within a narrowly perceived range of alternatives. It is also consistent with their shorter time horizon, and their predisposition to think in terms of jobs, not "careers."

Elucidation of these differences is augmented further by the ratings of counselors on the purpose of using information with clients. The response patterns shown in Table 18 are significant, not because of the differences between client groups on this dimension, but because of the differences as they relate to the preceding discussion. These data reveal a very significant difference between client and counselor perceptions of the purpose of using OIAS and the information presented through it.

The overall differences in ratings for disadvantaged and non-disadvantaged clients show that counselors saw exploration as the major purpose for using occupational information for both kinds of clients. They saw slightly fewer disadvantaged clients at a point of decision, but twice as many as having reached a decision previously and needing to confirm that decision through use of OIAS. This counselor's view, that more disadvantaged used OIAS to confirm a

TABLE 18

PURPOSE OF USING OCCUPATIONAL INFORMATION WITH CLIENTS AS RATED BY COUNSELORS

| Purpose | Non-Disadvantaged Clients | Disadvantaged Clients |
|---|---|---|
| Exploration | 68% | 57% |
| Decision | 18 | 15 |
| Confirmation | 14 | 28 |

previous decision, further substantiates the preceding observation that disadvantaged clients expressed a greater degree of certainty of choice than did non-disadvantaged clients prior to OIAS usage.

Of perhaps equal importance, however, are the differences between the perceptions of the purpose of using occupational information held by disadvantaged clients and those held by their counselors. While the data in Table 17 and Table 18 are not strictly comparable, there are some relationships which express some very pointed differences. Only 27 percent of the disadvantaged clients indicated that they were using OIAS because they were undecided about what occupation to follow, whereas counselors saw exploration as the main purpose of using occupational information with disadvantaged clients in 57 percent of the cases reported. At the very least, there is

considerable disparity between counselors and these clients about the clients' occupational planning status. These counselor ratings represent counselor judgments about where a client is in the occupational decision-making process. In a sense it is also an assessment by the counselor of the realism of the client's choices and decision, and the disparity may express the likelihood that the disadvantaged client has made prior choices or decisions based upon a narrowly perceived range of alternatives which in turn was based upon a definite lack of adequate occupational information.

In contrast to the differences of counselor and disadvantaged client ratings, there are very close similarities between counselor and non-disadvantaged client ratings. Sixty-seven percent of the non-disadvantaged clients indicated that their purpose in using OIAS was to help decide what occupation to follow. Counselors rated the purpose of information use with 68 percent of non-disadvantaged clients for the purpose of exploration. Since there is a high level of consistency between these two ratings, this finding further sharpens the difference found with disadvantaged clients.

More non-disadvantaged than disadvantaged clients saw OIAS providing at least some help in job planning, but it is important to note that the client who was seeking confirmation of a prior choice and who received no additional helpful information would tend to

respond in the "no" category. This point leads to another, broader factor. Since clients were included for test purposes who might not be referred to OIAS if it were available on a permanent basis, the proportion of those who were not helped by OIAS is probably somewhat exaggerated. Client desire and counselor judgment of the appropriateness of System usage on an ongoing basis would certainly reduce the proportion of negative responses.

In order to better understand, it is helpful to examine the tenor of client descriptive comments reporting why they were not helped by OIAS. The comments of disadvantaged clients were: "Because it didn't say anything about what I want;" "Jobs unrealistic for my qualifications;" and "It did not have the job I was looking for." Negative comments of non-disadvantaged clients ranged from "Not sure;" "Unsure at this time;" and "Still undecided;" to "Not enough different jobs." All other descriptive comments for both groups related how they were helped.

The preceding negative comments cited are also consistent with the differences in pattern in the decision-making process between disadvantaged and non-disadvantaged persons hypothesized above. Two of the three comments of disadvantaged persons indicated that OIAS didn't help them because it failed to confirm a prior choice. In contrast, the factor of uncertainty dominated the

responses of the non-disadvantaged clients. The positive comments of both groups, however, were highly similar, indicating that both non-disadvantaged and disadvantaged clients were helped in a very similar way.

Whereas the intensity of their negative comments differ, there is much similarity in the positive comments made by both groups of clients. Disadvantaged clients said they were helped in different ways:

"By telling me basically what I should know and where to obtain training."

"I didn't know there were so many fields related to the one I had in mind to follow."

"Made me think."

"By supplying me with information that was vital for my own consideration."

"Gave me some ideas."

"Gave me some other occupations to consider."

"By explaining in detail the work involved and the job opportunities offered."

Nondisadvantaged clients commented that OIAS:

"Gave me some ideas where to look for a job."

"Eliminated some possibilities and confirmed others."

"Told me where to get training I need."

"Gave me some new ideas."

"Helped by telling me more about what I had to know, what kind of training and education I had to have."

A related aspect of the difference was expressed in response of clients when queried whether they liked or disliked the information they received from OIAS. Only one out of 79 non-disadvantaged clients who responded said they disliked it, while 11 percent of the disadvantaged clients indicated they disliked it. These findings point out that, while a third of the clients reported that OIAS didn't help them make job plans, they overwhelmingly liked the information received. Thus, client perception of whether OIAS helped appears to include other factors. If OIAS usage decisively resulted in a clear step in the occupational decision-making process, it was viewed as helpful. If usage produced results which the client didn't like, a job they wouldn't want for instance, they responded with a negative rating. There were a number of descriptive comments reported by disadvantaged clients. These comments included:

"(Questionnaire) needs more questions."

"It didn't give me any specific job."

"Unrealistic; did not take my age into consideration."

"The answer it came out with; I didn't like that kind of work."

"The only problem was I didn't get auto mechanic."

"I'm a woman, they had jobs I thought more suited to a man."

"They did not have anything on cook."

The majority of these comments focus on a specific job which the client had previously chosen, or a specific result desired by the client. This type of response is characteristic of what disadvantaged clients hoped to obtain from using OIAS. There was a tendency for these clients to have a definite expectation about the results of OIAS. When this didn't occur, they were dissatisfied. This accounts partially for the lower amount of satisfaction and help disadvantaged clients reported obtaining from using OIAS.

Another crucial question of comparison between the two groups of clients was whether disadvantaged clients had more trouble using OIAS. A specific question in the client evaluation questionnaire was directed to this point. Slightly more disadvantaged than non-disadvantaged persons reported that they had some difficulty using the System, but these differences are not significant, though the types of problems differ. Over half of the comments of non-disadvantaged clients specified a problem of a mechanical nature, while over half of the problems experienced by disadvantaged persons were difficulties with reading and comprehending either the questionnaire or the instruction for terminal use. Two disadvantaged clients specifically said reading was the problem. This is to be

expected. However, responses and comments of both groups of clients clearly show that OIAS can be used easily and effectively by most disadvantaged as well as non-disadvantaged clients.

The findings and analysis of the test of OIAS reveal a distinct difference in the decision-making processes between disadvantaged and non-disadvantaged clients. This is an important finding for counseling as well as for information delivery systems. Despite these differences, OIAS helped both by expanding the range of possible occupations by providing information through which the client can eliminate some occupations and by providing highly detailed specific information. Thus, OIAS is sufficiently broad in scope to effectively relate the same occupational information to the needs of both disadvantaged and non-disadvantaged clients.

TABLE 19

CLIENT RESPONSES TO WHETHER THEY HAD ANY TROUBLE USING OIAS

| | Non-Disadvantaged Clients | Disadvantaged Clients |
|---|---|---|
| YES | 12% | 15% |
| NO | 88 | 85 |

# APPENDIX

## METHODOLOGY

This report is based on a field test of the Occupational Information Access System in the Counseling units of three Oregon Employment Division offices in Portland, the Concentrated Employment Program, Youth Opportunity Center, and the Adult Opportunity Center. Counseling supervisors from those offices participated with the project monitor for the agency, in the planning and operation of the test.

Evaluation design for a project such as OIAS is difficult because it is infeasible to systematically evaluate many, let alone all, of the plausible uses of the System. Furthermore, rigorous evaluation is often achieved at the expense of creative suggestion and innovative application, both of which are highly valuable in a developmental project. Another problem is that users and evaluators are influenced by many non-system features of the test: adequacy of training, other workload, management attitudes, etc. Substantial training and frequent opportunity for communication between project staff and local office staff were utilized as ways of handling the latter type of problem.

Counseling staff turnover was a problem, particularly in the Concentrated Employment Program. Staff reduction was occurring at the time the OIAS test began. During the course of the test and evaluation, two of the four CEP team counselors resigned and another was transferred. Of these, two were unavailable for follow-up interviews. In each of the other two offices one counselor had left and was unavailable for the final follow-up interview.

Evaluation Design. The evaluation design followed traditional experimental--control group methods. The evaluation was intended to assess:

| | |
|---|---|
| Usability: | e.g. Can disadvantaged clients operate the System themselves? How easy is the System for clients to use? |
| Performance: | e.g. To what extent is use of information increased? Is the information helpful to clients? What effect does the information have on client decisions? |
| Efficiency: | e.g. Staff time required. Time saved. |
| Suggestions: | e.g. Process or content improvements suggested by staff or clients. |

Each of the three Employment Service test offices was to select 100 clients who were in the process of making or changing occupational choice and in need of occupational information. These clients were to be randomly assigned to three groups:

--experimental group: computerized system
--experimental group: card-sort system
--control group

(The methods of study population selection and group assignment varied with office procedures.)

Three data sources were planned:

Counselor report:

Client characteristics
Type of use: exploration, decision, confirmation
Use mode: self, technical assistance, counselor assistance
Components used: QUEST, DESC, BIBL-BOOKS, Cassettes, Employer Index
Time cost: time spent, potential time saving
Performance: effect on decisions, resultant actions
Suggestions: application, content

Client report:

ease of use
helpfulness of information
use made of information
suggestions for improvement

Counselor records:

references to occupational information
number of counseling interviews/case
retention and successful closing, e.g. incidence of placement

Data from the first two sources were collected by the counselors and compiled by the project staff. Data from counselor records, which were to be compiled by the agency following the test, were omitted for lack of time and difficulty in accessing the records.

In all, 17 counselors and 267 clients (including 66 in a control group) participated in the Portland test. Random assignment of clients to the control group and the two experimental groups and the fact that each counselor

worked with clients in each of the groups provided control for client and counselor differences. During the test no distinction was made between disadvantaged and non-disadvantaged clients. Counselors simply completed a basic data sheet for each client on which they checked the client's disadvantaged status along with other characteristics. The breakdown of experimental group clients into disadvantaged and non-disadvantaged was done at the stage of data compilation and analysis. While a few counselors admitted some misc[illegible]creening of clients, it was judged that this activity did not alter the results of the test.

Individual counselors' case loads were not specialized; such differences in client characteristics as did exist were only a function of the differences in clientele served by the different offices. Characteristics of clients participating in the test are shown in Appendix Table 1.

Data for the evaluation were collected by means of three instruments: a questionnaire completed by the counselor following each client's use of the System, a questionnaire completed by the client (experimental groups only), and an interview conducted with each counselor following completion of the test. Copies of all these questionnaires appear at the end of this appendix.

Some clients and counselors did not complete every item in the evaluation questionnaires. Thus, calculations are made on the basis of the number who responded on each item, rather than on the total number of individuals participating.

## APPENDIX TABLE 1

## NUMBER AND CHARACTERISTICS OF CLIENTS PARTICIPATING IN PORTLAND TEST

| Client Characteristics | Control Group | Experimental Groups | |
|---|---|---|---|
| | | Non-Disadvantaged | Disadvantaged |
| Disadvantaged Status | | | |
| Disadvantaged | 33 | -- | 115 |
| Non-Disadvantaged | 33 | 86 | -- |
| Age | | | |
| Under 22 | 33 | 37 | 61 |
| 22-54 | 33 | 47 | 52 |
| 55+ | 0 | 2 | 2 |
| Highest School Grade Completed | | | |
| 0-7 | 0 | 0 | 2 |
| 8-11 | 14 | 13 | 44 |
| 12 | 40 | 33 | 52 |
| Over 12 | 12 | 40 | 17 |
| Clients Using Computer Version, Total: 107 | -- | 44 | 63 |
| Clients Using Card-Sort Version, Total: 94 | -- | 42 | 52 |

Planning and Administration. Planning the Portland test involved a number of interested parties. While the test outline was prepared by the project director, modifications were made based on suggestions by both USES national office and state agency personnel. Written comments and approval were received from Manpower Administration national office staff, including counseling and testing, labor market information, and occupational analysis divisions; both verbal and written comments were received from the state counseling supervisor and state supervisor of technical development and analysis. Meetings with state central office staff and Portland area staff (district supervisor, office managers, counseling supervisors, counselors) also contributed to test design, including decisions about components to be tested and procedures to be used in local offices.

The State Chief of Research served as the Oregon agency's chief contact person during the Portland test as he had throughout the project; the district supervisor and office managers participated in the decision to carry out the test, the location of the terminals, and other matters affecting the total office. The State Counseling Supervisor indicated that he would not take a highly active role in the test out of concern that the test appear to be something imposed on local offices by the central office, and schedule conflicts prevented his attendance at some meetings; nevertheless he, along with

other state office personnel, received periodic information from the agency's project monitor.

Whereas state agency personnel at all levels participated in planning, the administration of the Portland test was delegated by the agency to a small group composed of the Chief of Research representing the central office, the local office counseling supervisors representing the three test sites, and the project director. That group met on numerous occasions to clarify procedures, plan staff training, recommend locations for teletype terminals, etc.

Staff training in the use of the System and in completion of the evaluation instruments was conducted July 16, 19, and 20, 1971 by the project staff, with one session held for the counselors in each of the test offices. Day-to day supervision of the test was in the hands of the local office counseling supervisors. The project staff also made several visits to each of the offices during the test to answer questions, clarify procedures, check on progress, etc. On-site visits were also made by various state-office staff and two national-office staff. Some of these visits led to further improvements in the administration of the test and clarification of issues for the report.

Counselor workload placed constraints on the test just as it does for counseling services generally. Counselors were asked to use and evaluate OIAS without special adjustments in workloads.

As noted elsewhere in the report, test procedures required counselors to spend more time with OIAS than they would have spent had they been free to utilize it as they thought best. Despite the added work created by the OIAS test, counselors were highly cooperative with the conduct of the test.

COUNSELOR EVALUATION OF O.I.A.S. USAGE

Client_____

Counselor_____

Office_____

Client Characteristics (available from ES-511)

1. Highest School Grade: (check one)

| | |
|---|---|
| 0-7 | ( ) |
| 8-11 | ( ) |
| 12 | ( ) |
| Over 12 | ( ) |

2. Age: (check one)

| | |
|---|---|
| Under 22 | ( ) |
| 22-54 | ( ) |
| 55+ | ( ) |

3. Disadvantaged: (check one)

| | | |
|---|---|---|
| Yes | ( ) | Reason:_____ |
| No | ( ) | |

4. Aptitude Test Scores (if administered) GATB ( ) NATB ( )

G=_____ V=_____ N=_____ S=_____ P=_____ Q=_____ F=_____

5. Reading Level (if tested)
   Stanford - Primary II ( ), Int. II ( ), Adv. ( )
   AFLE - Level I ( ), Level II ( )
   WRAT (CEP) ( )

   Notes:

6. Which version of the system did you use with this client (check one):

| | |
|---|---|
| Computer | ( ) |
| Card-sort | ( ) |
| Neither (control group) | ( ) (Answer Question 7, then skip to Question 10) |

7. (FOR CONTROL GROUP ONLY)

Please describe briefly what occupational information you gave and what sources you used. Please identify materials used, organizations contacted, etc. (You may use the back of this page to continue your answer.)

8. Client Ability to Use the System (for Computer and Card Sort Groups)

Please indicate who did each of the following steps. Circle the most appropriate code:

1. client alone
2. client with only technical assistance from the counselor
3. client with counseling and interpretation from the counselor
4. counselor, with client watching or helping
5. counselor alone (using results indirectly in counseling)

About how much of your time did this step take?

QUESTIONNAIRE AND LIST (If not used, write "not used"):

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Step 1: | Filling out the questionnaire | 1 | 2 | 3 | 4 | 5 | Staff Time:_____ |
| | --Counselor review responses with client-- | | | | | | |
| Step 2: | Reading and understanding the instructions for using the terminal or card-sort (last page of the Questionnaire) | 1 | 2 | 3 | 4 | 5 | Staff Time:_____ |
| Step 3: | Typing answers in the terminal; or, sorting the cards | 1 | 2 | 3 | 4 | 5 | Staff Time:_____ |
| Step 4: | Reviewing the list of occupational titles | 1 | 2 | 3 | 4 | 5 | Staff Time:_____ |
| | --Counselor discuss the list with client-- | | | | | | |
| Step 5: | (Optional): "CHANGE," "START OVER," "WHY NOT" (circle the ones used, if any) | 1 | 2 | 3 | 4 | 5 | Staff Time:_____ |

Your Comments on Procedure:

Client Reaction:

OCCUPATIONAL DESCRIPTIONS (If not used, write "not used"):

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Step 1: | Getting the Description from the terminal or card deck | 1 | 2 | 3 | 4 | 5 | Staff Time:_____ |

Step 2: Reading the Description from the terminal or card 1 2 3 4 5 Time:_____

Step 3: Interpreting the Description 1 2 3 4 5 Time:_____

How many Descriptions were taken (if known)? _____

Comments on style and format (readability, organization, etc.):

Comments on content (topics covered, accuracy, etc. Especially note other information requested by the client.):

BIBLIOGRAPHY AND BOOKS (If not used, write "not used"):

Step 1: Looking up the Bibliography sheet in the Bibliography Notebook 1 2 3 4 5 Time:_____

Step 2: Selecting the book to read 1 2 3 4 5 Time:_____

Step 3: Reading the book or report 1 2 3 4 5 Time:_____

Step 4: Interpreting book or report information 1 2 3 4 5 Time:_____

Which Books were used?_____

_____

Comments:

INTERVIEW CASSETTES TAPES (If not used, write "not used"):

Step 1: Finding the Cassette 1 2 3 4 5 Time:_____

Step 2: Operating the Cassette Player 1 2 3 4 5 Time:_____

Step 3: Listening to the Cassette 1 2 3 4 5 Time:_____

Step 4: Interpreting the Cassette 1 2 3 4 5 Time:_____

EMPLOYER INDEX (used by counselor) (If not used, write "not used"):

Staff Time:_____

Comments on Procedure: (Identifying Occupational Specialties, using Employer Index print-out, finding other necessary information, presenting information to client.)

9. (Computer and Card-sort groups only)

Suppose you did not have OIAS available. Please estimate how long it would have taken you to get equally adequate information to use with your client?

_____
(estimate)

Comments:

10. How would you characterize the purpose for using occupational information with this client? (check one)

Exploration : To facilitate exploration of occupational opportunities and the factors to be considered in making a choice. ( )

Decision : To get information on which to base a decision ( )

Confirmation: To get information to validate a tentative decision already arrived at ( )

11. Please describe briefly how the use of occupational information effected client decisions.

Rate: Information was: Highly influential ( ) Somewhat influential ( )

Not influential ( )

12. Can you identify any actions by the client that are attributable (partly or completely) to use of this information? Please describe briefly and try to indicate the influence of OIAS (if OIAS was used.)

--to be completed by clients

Name _____

The Occupational Information Access System (OIAS) is very new, and we are trying it out to see how much it helps people. We want to know what you think of it.

1. When you used it: (check one)

   a. Were you looking for a job? ( )

   b. Or, did you have some future occupations in mind that you needed to find out more about ( )

   c. Or, were you undecided about what occupation to follow? ( )

2. Did OIAS help you make your job plans?

   Definitely Yes ( ) Yes ( ) No ( ) Definitely No ( )

   How? _____

   _____

   _____

3. How many different times did you use the system? _____

4. Altogether, about how much time did you spend using the system?

   _____

5. Did you have any trouble using OIAS?

   Yes ( ) No ( )

   If so, what kind of trouble? _____

   _____

   _____

6. How did you like the information you got from OIAS?

   a) Like it very much ( ) c) Disliked it ( )
   b) Like it ( ) d) Disliked it very much ( )

What did you especially like or dislike about it? _____

_____

_____

7. Which parts of the system did you use: (check the parts you used)

| | |
|---|---|
| Questionnaire and list of job titles | ( ) |
| Job Descriptions | ( ) |
| Bibliography Notebook, books, and other written material | ( ) |
| Interview Cassette Tapes | ( ) |
| Employer Index (from your counselor) | ( ) |

Which one was most helpful? (check one)

| | |
|---|---|
| Questionnaire and list | ( ) |
| Job Descriptions | ( ) |
| Bibliography and Books | ( ) |
| Interview Cassette Tapes | ( ) |
| Employer Index | ( ) |

Why? _____

_____

Which one was least helpful?

| | |
|---|---|
| Questionnaire and list | ( ) |
| Job Descriptions | ( ) |
| Bibliography and Books | ( ) |
| Interview Cassette Tapes | ( ) |
| Employer Index | ( ) |

Why? _____

_____

| | Yes Definitely | Yes | No | Definitely Not | Don't Know |
|---|---|---|---|---|---|
| 8a. Job Descriptions (if you used them) | | | | | |
| Accurate and up-to-date | ( ) | ( ) | ( ) | ( ) | ( ) |
| Complete (covered all important topics) | ( ) | ( ) | ( ) | ( ) | ( ) |
| Easy to read | ( ) | ( ) | ( ) | ( ) | |
| Fun to use | ( ) | ( ) | ( ) | ( ) | |
| Related the job to my own likes and dislikes, values and skills | ( ) | ( ) | ( ) | ( ) | |

Comments: _____

| | | | | | |
|---|---|---|---|---|---|
| 8b. Bibliography and Books (if you used them) | | | | | |
| Accurate and up-to-date | ( ) | ( ) | ( ) | ( ) | ( ) |
| Complete (covered all important topics) | ( ) | ( ) | ( ) | ( ) | ( ) |
| Easy to read | ( ) | ( ) | ( ) | ( ) | |
| Fun to use | ( ) | ( ) | ( ) | ( ) | |
| Related the job to my own likes and dislikes, values and skills | ( ) | ( ) | ( ) | ( ) | |

| | Yes Definitely | Yes | No | Definitely Not | Don't Know |
|---|---|---|---|---|---|
| 8c. The Interview Cassette Tapes (if they were used) | | | | | |
| Fun to use | ( ) | ( ) | ( ) | ( ) | |
| Easy to understand | ( ) | ( ) | ( ) | ( ) | |
| Gave a good idea what the work is really like | ( ) | ( ) | ( ) | ( ) | ( ) |
| Related the job to my own likes and dislikes, values and skills | ( ) | ( ) | ( ) | ( ) | |

Which tape(s) did you use? _____

Comments: _____

8d. The Questionnaire (if you used it)

| | | | | |
|---|---|---|---|---|
| Easy to read | ( ) | ( ) | ( ) | ( ) |
| Fun to use | ( ) | ( ) | ( ) | (( ) |
| Asked the right questions | ( ) | ( ) | ( ) | ( ) |
| Related jobs to my own likes and dislikes, values and skills | ( ) | ( ) | ( ) | ( ) |

Did the questionnaire give you some new job titles that you would consider for future work?

| | | | |
|---|---|---|---|
| Definitely Yes | ( ) | No | ( ) |
| Yes | ( ) | Definitely No | ( ) |

Comments: _____

9. If you need job information later, would you want to use OIAS again?

Yes ( ) No ( )

Why? _____

_____

10a. What information would you use that OIAS didn't have?

10b. Can you think of other things that would make OIAS better?

11. Would you like to see OIAS kept at the Employment Division?

| | | | |
|---|---|---|---|
| Definitely Yes | ( ) | No | ( ) |
| Yes | ( ) | Definitely No | ( ) |

12. Other comments:

# NOTES TO INTERVIEWERS

| | |
|---|---|
| Taping: | Request, but don't insist upon taping. |
| Candor: | Encourage frank responses. We want candid responses - both negative and supportive. |
| Confidentiality: | Assure them that they will not be quoted by name. Request permission to excerpt the tape for an audio report. |
| Notes: | Make brief notes (summaries) about responses on the questionnaire, so we'll have an idea of the counselor's response without going to the tape. Note especially quotable responses.<br><br>Periodically, write the tape position beside a question to help in locating that response. |
| Redundancy: | If you feel you have already answered a particular question, just say so and we'll go on. |
| Key Questions: | You may need to cut down the length of the interview because a counselor is uncooperative or is not well informed about the system (some used it only a few times.) In that case, you may want to use just the key questions which are marked with asterisks. |

FINAL
COUNSELOR EVALUATION OF
O.I.A.S. USAGE

Counselor_____

Office_____

Number Clients Who
Used OIAS _____

Interviewer_____

GENERAL

*General Comments: What is your general reaction to OIAS?

*To what extent did OIAS make it possible for you to use information in counseling that you would not have used otherwise?

How much time did it save you, say in a week?

*Which part of the system do you like best? Why?

*Which part of the system do you like least? Why?

*We have noticed that usage has dropped off recently. Why do you think that is?

*Are there parts of OIAS you would like to see kept in your office permanently?

*Do you think the Portland test provided a fair evaluation of OIAS? Are there things the evaluation didn't take into account?

APPROPRIATE CLIENTS:

*Are there special things about your own case load that affected the test of OIAS? (Note special case loads, e.g. youth at YOC)

*Did you find OIAS more useful with one kind of client than another? Which?

Were there any types of clients that it was especially bad with?

Were those differences equally true for both the card-sort and computer versions?

CARD-SORT vs COMPUTER:

*How would you compare the manual (card-sort) and computer versions? Is one much easier for clients to understand and use? Which?

Is one much more attractive to clients?

Is one much more effective with clients? How?

Is one a more convenient resource for your own use (work with clients, MDTA referral justification, etc.)? Did you use it much as your own reference source? How?

(If not already mentioned): Was computer down time a problem for you?

Are there other things about either system which made it difficult to use?

I have two questions specifically about the card-sort system:
Do clients usually read most of the Descriptions on the cards that remain on their list?

We've thought of shortening the material on the cards to just three or four brief statements about the occupation and perhaps adding some graphics. We could then provide a printout of the Descriptions, like those from the computer, for further reference. What do you think of that idea? Would clients look up the Descriptions?

QUESTIONNAIRE and LIST

*General Reaction: What is your general reaction to the QUEST Questionnaire and list?

*Readability: How would you rate the reading difficult of the questionnaire for your clients?

Are there particular questions you found hard for your clients to understand?

Are there particular questions you found inappropriate for your clients?

*I'd like you to quickly look through the questionnaire and tell me, for each question, whether you would suggest keeping it as it is, changing it, or dropping it. [NOTE: Try to get suggestions as to what kind's of changes are desirable.]

| | Keep As Is | Change (How?) | Drop |
|---|---|---|---|
| Physical Limitations: | | | |
| 1. Lifting | ( ) | ( ) | ( ) |
| 2. Impaired Vision | ( ) | ( ) | ( ) |
| 3. Deafness | ( ) | ( ) | ( ) |
| Location: | | | |
| 4. Region | ( ) | ( ) | ( ) |
| 5. City Size | ( ) | ( ) | ( ) |
| 6. Working Conditions | ( ) | ( ) | ( ) |
| 7. Sex | ( ) | ( ) | ( ) |

(Some people have suggested dropping the sex question, because a client's response might be based on stereotypes about the sexes. Would you recommend keeping or dropping that question? Why?)

Education and Training:

| | | | |
|---|---|---|---|
| 8. Education | ( ) | ( ) | ( ) |

Aptitudes:

| | | | |
|---|---|---|---|
| 9. Working with Hands | ( ) | ( ) | ( ) |
| 10. Eye for Accuracy | ( ) | ( ) | ( ) |
| 11. Ability with Words | ( ) | ( ) | ( ) |
| 12. Working with Numbers | ( ) | ( ) | ( ) |
| 13. Catching on to Things | ( ) | ( ) | ( ) |

(The interest questions are based on the data-people-things classification of the DOT. Do you think they are a good basis for clients expressions of interest?

Interests:

Working with Things:

| | | | |
|---|---|---|---|
| 14. Precision Work | ( ) | ( ) | ( ) |
| 15. Operating Equipment | ( ) | ( ) | ( ) |
| 16. Handling Materials | ( ) | ( ) | ( ) |

Working with Information:

| | | | |
|---|---|---|---|
| 17. Interpreting Facts | ( ) | ( ) | ( ) |
| 18. Organizing and Using Information | ( ) | ( ) | ( ) |
| 19. Copying, Sorting, Putting things together | ( ) | ( ) | ( ) |

Working with People:

| | | | |
|---|---|---|---|
| 20. Counseling | ( ) | ( ) | ( ) |
| 21. Discussing, Bargaining | ( ) | ( ) | ( ) |
| 22. Teaching, Supervising | ( ) | ( ) | ( ) |
| 23. Selling, Persuading | ( ) | ( ) | ( ) |
| 24. Assisting | ( ) | ( ) | ( ) |

Earnings:

| | | | |
|---|---|---|---|
| 25. Monthly Wage | ( ) | ( ) | ( ) |

Are there other questions which should be asked? What?

*If you were free to use the questionnaire any way you wanted to in your counseling, how would you use it?
[Interviewer: use the following codes when appropriate:]

1. Client alone
2. Client with only technical assistance from the counselor
3. Client with counseling and interpretation from the counselor
   [Note: clarify whether counselor considers his input necessary or desirable]
4. Counselor, with client watching or helping
5. Counselor alone (with results indirectly in counseling.)

Step 1: Filling out the questionnaire 1 2 3 4 5

Step 2: Reading and understanding the instructions for using the terminal or card-sort (last page of the Questionnaire 1 2 3 4 5

Step 3.: Typing answers in the terminal; or, sorting the cards 1 2 3 4 5

Step 4: Reviewing the list of occupational titles 1 2 3 4 5

Step 5: (Optional): "CHANGE," "START OVER," "WHY NOT" 1 2 3 4 5
(Circle the ones used frequently)

During the test we said a counselor should review the client's questionnaire with him before getting a list. How necessary is that?

We also said the counselor should discuss the list with his client. How important would you say that is?

LIST:

What about the length of the Lists? Were there any particular problems associated with that?

Did you find the "Cluster" or occupational family format of the list helpful, or would it have been better to use DOT codes?

*Were there particular things about the lists that were confusing to clients? What?

*Could you explain the reason why certain occupations appeared on the list and others did not? [Know how to use WHY NOT? ATTR coding accurate?]

*Do you think there is a danger of clients taking the list too seriously?

*Is this a greater danger with the computer version?

*How do you feel about independent client use of the QUEST? How important is it for a counselor to be involved? [Summarize statement; circle one:
essential desirable it depends undesirable].

DESCRIPTIONS:

*General Reaction: Generally, what is your opinion of the Descriptions?

Do you have any comments on the procedures used for getting Descriptions?

Should clients be allowed to get Descriptions independently, or is counselor interpretation necessary? If so, why?

READABILITY:

Did your clients have trouble understanding the Descriptions?

What effect did the terminal have on client's willingness to read the Descriptions? Why, do you think?

Can you suggest improvements in style or format of the Descriptions?

*How would you rate the currency of the information? (circle one:)
Very good Fairly good Fairly poor Very poor

*What do you think of the overall length of the Descriptions?

Here is a typical Description, and here is a list of topics usually covered. How could the space be better allocated? (Ignore information availability constraints).

| | Length | | | |
|---|---|---|---|---|
| | More | Same | Less | Drop |
| NATURE OF JOB | | | | |
| Function: | ( ) | ( ) | ( ) | ( ) |
| Job Duties: | ( ) | ( ) | ( ) | ( ) |
| Occupational Specialities: | ( ) | ( ) | ( ) | ( ) |
| WORKING CONDITIONS | | | | |
| Current Employment: | ( ) | ( ) | ( ) | ( ) |
| Employers: | ( ) | ( ) | ( ) | ( ) |
| Work Environment: | ( ) | ( ) | ( ) | ( ) |
| Work Schedule: | ( ) | ( ) | ( ) | ( ) |
| Organizations: | ( ) | ( ) | ( ) | ( ) |
| Wages & Fringe Benefits: | ( ) | ( ) | ( ) | ( ) |
| QUALIFICATIONS | | | | |
| Native Qualifications: | ( ) | ( ) | ( ) | ( ) |
| Legal Qualifications: | ( ) | ( ) | ( ) | ( ) |
| Education, Training, Experience: | ( ) | ( ) | ( ) | ( ) |
| Training Sources: | ( ) | ( ) | ( ) | ( ) |
| Hiring Channels: | ( ) | ( ) | ( ) | ( ) |
| Promotional Ladder: | ( ) | ( ) | ( ) | ( ) |
| EMPLOYMENT PROSPECTS | | | | |
| Demand: | ( ) | ( ) | ( ) | ( ) |
| Supply: | ( ) | ( ) | ( ) | ( ) |
| Supply/Demand: | ( ) | ( ) | ( ) | ( ) |

OTHER TOPICS _____

_____

*Do you remember any particular things being wrong or ambiguous in any of the Descriptions, things that we should check into?

BIBLIOGRAPHY and BOOKS:

*General Reactions: How do you feel about the Bibliography and Books?

Can clients use it independently?

Is the Bibliography worth continuing?

How is it best used?

What do you think of the number of publications in the Bibliographies?

What do you think of the particular publications included? Are there others you would like to see included?

What other information about the publications would be helpful?

*Suggestions?

CASSETTES

*General Reactions:

Did clients have trouble operating the cassettes themselves?

Is this a useful part of the system?'

How are the cassettes best used?

How is the length of the cassette interviews?

Are there other questions which should be asked on the tapes?

Is there other information we should add to the tapes?

Are there particular occupations you would like to have tapes for?

*Suggestions?

EMPLOYER INDEX

*General Reactions:

Is this component worth continuing?

Comments on using the Employer Index:

1. Identifying Occupational Specialties (Typing EMPLY occupational code); (getting DOT codes and titles)

2. Did you have any trouble using Employer Index Print-outs?

3. Did you have trouble finding other necessary information (addresses phone numbers, etc.?)

4. How did you present the information to your client?

Why wasn't the Employer Index used more, do you think?

*Suggestions?

CONCLUDING COMMENTS

What do you think should be done next with OIAS?

Are there other kinds of information you would like to have readily available?

Do you have any final things you want to say before we finish?

Requests:

We may decide to produce a taped report, using excerpts from some of these evaluation interviews. Is it all right with you if we use part of this tape in that way. We would not use your name.

Yes, you may use the tape (  ).

No, I'd rather you didn't quote me (  ).